Access DB# 87410

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Noam Hugick Examiner #: 78753 Date: 2/25/03
Art Unit: 1644 Phone Number 308-4844 Serial Number: 10/071,247
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Jan, please search Claims 1-20; Particularly Claims 11, 12 & 20

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Structure (#) ✓
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Other (specify) _____

PTO-1590 (8-01)

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FILE COVERS 1907 - 8 Mar 2003 VOL 138 ISS 11
FILE LAST UPDATED: 7 Mar 2003 (20030307/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L147 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:51893 HCAPLUS
DN 136:123598
TI Production and use of novel **peptide**-based agents for use with bi-specific **antibodies**
IN Hansen, Hans J.; **Griffiths, Gary L.**; Leung, Shui-on; McBride, William J.; Qu, Zhengxing
PA USA
SO U.S. Pat. Appl. Publ., 37 pp., Cont.-in-part of U. S. Ser. No. 337,756.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K051-00
ICS A61K039-40; A61K039-42; A61K039-395; C12Q001-70
NCL 424001490
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 1, **8**, 9, **15**
FAN.CNT 14

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002006379	A1	20020117	US 2001-823746	20010403
	WO 2002082041	A2	20021017	WO 2002-US10235	20020403

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI	US 1998-90142P	P	19980622
	US 1998-104156P	P	19981014
	US 1999-337756	A2	19990622
	US 2001-823746	A	20010403

AB The present invention relates to a bi-specific **antibody** or

antibody fragment having at least one arm that is reactive against a targeted tissue and at least one other arm that is reactive against a linker moiety. The linker moiety encompasses a **hapten** to which **antibodies** have been **prepd**. The antigenic linker is conjugated to one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the bispecific **antibodies** or **antibody** fragments, as well as methods for using them.

ST bispecific **antibody peptide** drug targeting diagnosis sequence

IT Antigens
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CSAp (colon-specific antigen-p); **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT **Haptens**
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HSG (histamine succinyl glycine); **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT **Proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PAP (pokeweed antiviral **protein**); **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Diagnosis
(agents; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT **Antibodies**
RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(bispecific; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT **Antibodies**
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chimeric; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diphtheria; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Gamma ray
(emission of; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(endotoxins, Pseudomonas; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(enterotoxin A; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(exotoxins, Pseudomonas; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Immunoglobulins
RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fragments, bispecific; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT NMR (nuclear magnetic resonance)

(high-field; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Parvo-like virus
(human serum; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT **Antibodies**
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(humanized; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Mammalia
(imaging in; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Spirochaetales
(of Lyme disease; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Virus
(pathogenic; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Adenoviridae
Antibacterial agents
Antitumor agents
Antiviral agents
Bluetongue virus
Brucella melitensis
Chelating agents
Cytomegalovirus
Dengue virus
Drug delivery systems
Escherichia coli
Fast atom bombardment mass spectrometry
Feline leukemia virus
Fungicides
Hepatitis B virus
Herpesviridae
Human T-lymphotropic virus
Human herpesvirus 3
Human herpesvirus 4
Human immunodeficiency virus
Human poliovirus
Imaging
Imaging agents
Influenza virus
Legionella pneumophila
Lymphocytic choriomeningitis virus
Measles virus
Mouse mammary tumor virus
Mumps virus
Murine leukemia virus
Mycobacterium leprae
Mycobacterium tuberculosis
Neisseria gonorrhoeae
Neisseria meningitidis
Ovary
Parasite
Parasiticides
Parathyroid gland
Pathogen
Pathogenic bacteria
Photodynamic therapy
Photosensitizers (pharmaceutical)
Positron-emission tomography
Protein sequences

Pseudomonas aeruginosa
Rabies virus
Reoviridae
Respiratory syncytial virus
Rubella virus
Sendai virus
Simian virus 40
Sindbis virus
Spleen
Streptococcus agalactiae
Streptococcus pneumoniae
Streptococcus pyogenes
Thymus gland
Treponema pallidum
Vesicular stomatitis virus
cDNA sequences
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Fusion **proteins** (chimeric **proteins**)
RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Carcinoembryonic antigen
Enzymes, biological studies
Radionuclides, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Abrins
Ricins
Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Drug delivery systems
(prodrugs; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT HPLC
(size-exclusion; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Lyme disease
(spirochetes; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Drug delivery systems
(targeted; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Neoplasm
(targeting of; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tetanus; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Human
(tumor cell lines; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Antigens
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-specific antigens; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT Haemophilus influenzae
(type b; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT Fungi
(zoopathogenic; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT 192382-42-6D, Histamine succinyl glycine, conjugates
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HSG; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT 12585-85-2, Positron
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(emission of; **peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT 389617-27-0DP, triazacyclononanetriacetic acid thiol-contg. conjugates
389617-29-2DP, triazacyclononanetriacetic acid thiol-contg. conjugates
RL: DGN (Diagnostic use); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT 391267-27-9P, IMP 241 391267-28-0P, IMP 237 391267-29-1P, IMP 243
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-54-2**, Gadolinium, biological studies 10043-66-0, Iodine 131, biological studies 10098-91-6, Yttrium 90, biological studies 13967-65-2, Holmium 166, biological studies 13981-25-4, Copper 64, biological studies 13981-27-6, Zirconium 89, biological studies **13981-56-1**, **Fluorine 18**, biological studies 14093-04-0, Iron 52, biological studies 14119-09-6, Gallium 67, biological studies 14133-76-7, Technetium 99, biological studies 14158-30-6, Iodine 124, biological studies 14158-31-7, Iodine 125, biological studies 14191-64-1, Praseodymium 142, biological studies 14265-75-9, Lutetium 177, biological studies 14265-85-1, Actinium 225, biological studies 14276-53-0, Copper 62, biological studies 14378-26-8, Rhenium 188, biological studies 14391-19-6, Terbium 161, biological studies 14391-96-9, Scandium 47, biological studies 14596-37-3, Phosphorus 32, biological studies 14798-12-0, Boron 10, biological studies 14809-53-1, Yttrium 86, biological studies 14809-55-3, Technetium 94, biological studies 14913-49-6, Bismuth 212, biological studies 14998-63-1, Rhenium 186, biological studies 15092-94-1, Lead 212, biological studies 15623-45-7, **Radium** 223, biological studies 15715-08-9, Iodine 123, biological studies 15749-66-3, Phosphorus 33, biological studies 15750-15-9, Indium 111, biological studies 15755-39-2, Astatine 211, biological studies 15757-14-9, Gallium 68, biological studies 15757-86-5, Copper 67, biological studies 15760-04-0, Silver 111, biological studies 15765-78-3, Rhenium 189, biological studies 15766-00-4, Samarium 153, biological studies 15776-20-2, Bismuth 213, biological studies 15840-01-4, Dysprosium 166, biological studies 129497-78-5, BPD-MA 134307-90-7 246252-04-0, Lutex 284041-10-7, SnET2
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)
IT 50-44-2, 6-Mercaptopurine 59-05-2, Methotrexate 9001-99-4, Ribonuclease 9003-98-9, Dnase I 23214-92-8, Doxorubicin 23214-92-8D, Doxorubicin, glucuronide deriv. 33419-42-0, Etoposide 75037-46-6,

Gelonin 86639-52-3, Sn38 92137-84-3, Epirubicin glucuronide 100007-55-4, Etoposide glucuronide 100286-90-6, Cpt-11 117091-64-2, Etoposide phosphate 229314-81-2
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

IT 390884-46-5 390884-47-6 390884-48-7 390884-49-8 390884-50-1 390884-51-2 390884-52-3 390884-53-4 390884-54-5 390884-55-6 390884-56-7 390884-57-8 390884-58-9 390884-59-0
RL: PRP (Properties)
(unclaimed sequence; prodn. and use of novel **peptide**-based agents for use with bi-specific **antibodies**)

IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-54-2**, Gadolinium, biological studies **13981-56-1**, **Fluorine 18**, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide**-based diagnostic and therapeutic agents for use with bi-specific **antibodies**)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-54-2 HCAPLUS
CN Gadolinium (8CI, 9CI) (CA INDEX NAME)

Gd

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L147 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:176017 HCAPLUS
DN 132:219218
TI Diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates
IN Goldenberg, David M.
PA **Immunomedics, Inc., USA**
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC G01N033-53
CC 9-10 (Biochemical Methods)
Section cross-reference(s): **8**, 14, **15**

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000014537	A2	20000316	WO 1999-US20017	19990901
	WO 2000014537	A3	20000720		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GD, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9957991	A1	20000327	AU 1999-57991	19990901
PRAI	US 1998-99304P	P	19980904		
	US 1998-99304	P	19980904		
	WO 1999-US20017	W	19990901		

AB Immunoconjugates of a diagnostic agent and an **antibody** component that binds an epitope of a multidrug transporter **protein** are disclosed. Thesse immunoconjugates are used in in vivo diagnostic methods to det. whether the failure of traditional chemotherapy is due to the presence of multidrug resistant tumor cells, multidrug resistant HIV-infected cells or multidrug resistant infectious agents.

ST multidrug resistance diagnosis cancer infection immunoconjugate; **antibody** conjugate diagnostic agent multidrug transporter **protein**

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(AcrE, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(ActII, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Bcr, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Bmr, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(CmlA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(DrrA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(DrrB, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(EmrB, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(EmrD, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(EnvD, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(MexB, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Mmr, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(MsrA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(MvrC, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(NorA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(OprK, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL

(Biological study); PROC (Process); USES (Uses)
(OtrB, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(QacA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(QacE, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Smr, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(TcmA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(Tel(L), **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(TetA, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Proteins, specific or class**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(TlrC, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Diagnosis
(agents, conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Primate
(**antibodies** of, conjugates with diagnostic agents, to multidrug transporter **proteins**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT P-glycoproteins
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(**antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Luminescent substances
(bioluminescent, conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Neoplasm
(cells of; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT Chemiluminescent substances
Fluorescent substances
Paramagnetic materials
Radioactive substances
(conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT Avidins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(conjugates, with **antibody** to multidrug transporter **protein** or with diagnostic agent; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT Enzymes, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(conjugates, with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT **Antibodies**
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(conjugates, with diagnostic agents, to multidrug transporter **proteins**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT **Haptens**
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(**conjugates**, with diagnostic marker, complexes with bispecific **antibody**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT AIDS (disease)
Human immunodeficiency virus
Infection
Mammal (Mammalia)
Multidrug resistance
Pneumonia
Scintigraphy
Single-photon-emission computed tomography
(diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT Immunoglobulins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(fragments, conjugates with diagnostic agents, to multidrug transporter **proteins**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT **Radionuclides**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(gamma-emitters and positron-emitters, conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)
IT **Antibodies**

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(humanized, conjugates with diagnostic agents, to multidrug transporter **proteins**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Drug delivery systems
(immunoconjugates; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Avidins
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(in clearing compn.; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **Antibodies**
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(monoclonal, conjugates, with diagnostic agents, to multidrug transporter **proteins**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Pseudomonas aeruginosa
(multidrug resistant; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Transport **proteins**
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(multidrug, **antibody** conjugate to; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Materials
(photoactive chems., conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Dyes
(photoactive, conjugates with **antibody** to multidrug transporter **protein**; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Alcohols, analysis
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(polyhydric, conjugates with biotin or avidin or streptavidin, in clearing compn.; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT Glycoconjugates
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(with biotin or avidin or streptavidin, in clearing compn.; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 13718-28-0, Sodium pertechnetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(**antibody** labeling with; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 50800-85-6, Indium-111 chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(**antibody**-chelator conjugate labeling with; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 7440-57-5D, Gold, conjugates with **antibody** to multidrug transporter **protein**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(colloidal; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 67-43-6DP, DTPA, derivs., conjugates with **antibody** to multidrug transporter **protein**, complexes with indium-111 15750-15-9DP, Indium-111, conjugates with **antibody** to multidrug transporter **protein**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 58-85-5D, Biotin, conjugates with **antibody** to multidrug transporter **protein** or with diagnostic agent 9013-20-1D, Streptavidin, conjugates with **antibody** to multidrug transporter **protein** or with diagnostic agent 10043-66-0D, Iodine-131, conjugates with **antibody** to multidrug transporter **protein**, biological studies **13981-56-1D**, **Fluorine-18**, conjugates with **antibody** to multidrug transporter **protein**, biological studies 14119-09-6D, Gallium-67, conjugates with **antibody** to multidrug transporter **protein**, biological studies 14158-30-6D, Iodine-124, conjugates with **antibody** to multidrug transporter **protein**, biological studies 14158-31-7D, Iodine-125, conjugates with **antibody** to multidrug transporter **protein**, biological studies 15715-08-9D, Iodine-123, conjugates with **antibody** to multidrug transporter **protein**, biological studies 15757-14-9D, Gallium-68, conjugates with **antibody** to multidrug transporter **protein**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 58-85-5, Biotin 9004-54-0D, Dextran, conjugates with biotin or avidin or streptavidin, analysis 9013-20-1, Streptavidin
RL: ARU (Analytical role, unclassified); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(in clearing compn.; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT 14133-76-7D, Technetium-99, conjugates with **antibody** to multidrug transporter **protein**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(metastable; diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

IT **13981-56-1D**, **Fluorine-18**, conjugates with **antibody** to multidrug transporter **protein**, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(diagnosis of multidrug resistance in cancer and infectious lesions using immunoconjugates)

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L147 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:184209 HCAPLUS
DN 130:206780
TI Fluorination of **proteins** and **peptides** for **F-18** positron emission **tomography**
IN **Griffiths, Gary L.**
PA **Immunomedics, Inc., USA**
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07B059-00
ICS A61K051-08; C07K001-13
CC 8-1 (**Radiation** Biochemistry)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9911590	A1	19990311	WO 1998-US18268	19980903	<--
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	AU 9893756	A1	19990322	AU 1998-93756	19980903	<--
	EP 1009726	A1	20000621	EP 1998-946820	19980903	<--
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	US 6187284	B1	20010213	US 1998-146318	19980903	<--
	JP 2001515843	T2	20010925	JP 2000-508634	19980903	<--
	US 6358489	B1	20020319	US 2000-644706	20000824	<--
	US 2002119096	A1	20020829	US 2002-71247	20020211	<--
PRAI	US 1997-57485P	P	19970903	<--		
	US 1998-146318	A3	19980903			
	WO 1998-US18268	W	19980903			
	US 2000-644706	A3	20000824			

OS MARPAT 130:206780
AB **Thiol**-contg. **peptides** can be **radiolabeled** with **fluorine-18** (**F-18**) by reacting a **peptide** comprising a free **thiol** group with an **F-18**-bound labeling reagent which also has a group that is reactive with **thiols**. The labeling reagent has the general formula **18F**-(CH2)m-CR1R2-(CH2)n-X, where n = 0, 1 or 2; m = 0, 1 or 2; and n + m = 0, 1 or 2. X is selected from a group including halides, azide, tosylate, maleimides, etc. R1 and R2 are the same or different and may be, among others, a halide, triflate, hydroxyl, alkyl. The resulting **F-18**-labeled **peptides** may be targeted to a tissue of interest using bispecific **antibodies** or bispecific **antibody** fragments having one arm specific for the **F-18**-labeled **peptide** or a low mol. wt. **hapten** conjugated to the **F-18** -labeled **peptide**, and another arm specific to the targeted tissue. The targeted tissue is subsequently visualized by clin. positron emission **tomog**.

ST **fluorine 18** labeling **protein peptide**
PET

IT Immunoglobulins
RL: SPN (Synthetic preparation); PREP (Preparation)
(G3, **radiolabeled**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT Carcinoembryonic antigen
RL: MSC (Miscellaneous)
(**antibody** fragment to; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **Haptens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**conjugates** with **radiopharmaceuticals**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT Drug targeting
Fluorination
Positron-emission tomography
Radiopharmaceuticals
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT Reagents
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT Immunoglobulins
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(fragments, for **radiolabeling** and targeted **radiopharmaceuticals**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **Antibodies**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(humanized, for targeted **radiopharmaceuticals**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **Antibodies**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(monoclonal, for targeted **radiopharmaceuticals**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **Antibodies**
RL: SPN (Synthetic preparation); PREP (Preparation)
(single chain, **radiolabeled**; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **Peptides, reactions**
Proteins, specific or class
RL: RCT (Reactant); RACT (Reactant or reagent)
(**thiol** group-contg.; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **7439-89-6D**, Iron, complexes conjugated with **radiopharmaceuticals**, biological studies **7439-96-5D**, Manganese, complexes conjugated with **radiopharmaceuticals**,

biological studies **7440-54-2D**, Gadolinium, complexes conjugated with **radiopharmaceuticals**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **220934-28-1P 220934-29-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT 9034-40-6DP, LH-RH, **radiolabeled** cysteine deriv.
220934-30-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT **220934-31-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT 181224-33-9 **220934-32-7 220934-33-8**
220934-34-9 220934-35-0 220934-36-1
220934-37-2 220934-38-3 220934-39-4
220934-40-7 220934-41-8 220934-42-9
220934-43-0 220934-44-1 220934-45-2
220934-46-3 220934-47-4 220934-48-5
220934-49-6 220934-50-9 220934-51-0
220934-52-1 220934-53-2 220934-54-3D, iodinated
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeling reagent; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

IT 75-47-8, Triiodomethane 594-68-3, Triiodoacetic acid **67862-54-8**, Fluoride (**18F1**-) 91795-63-0 205652-45-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Immunomedics; WO 9816254 A 1998 HCAPLUS
(2) Kilbourn, M; JOURNAL OF NUCLEAR MEDICINE 1987, V28(4), P462 HCAPLUS
(3) Lang, L; APPLIED RADIATION AND ISOTOPES 1994, V45(12), P1155 HCAPLUS
(4) Page, R; NUCLEAR MEDICINE AND BIOLOGY 1994, V21(7), P911 HCAPLUS
(5) Shiue, C; JOURNAL OF LABELLED COMPOUNDS AND RADIOPHARMACEUTICALS 1989, V26, P287
(6) Vaidyanathan, G; BIOCONJUGATE CHEMISTRY 1994, V5, P352 HCAPLUS
(7) Vaidyanathan, G; NUCLEAR MEDICINE AND BIOLOGY 1995, V22(6), P759 HCAPLUS
(8) Wilbur, D; BIOCONJUGATE CHEMISTRY 1992, V3(6), P433 MEDLINE
(9) Zheng, L; JOURNAL OF NUCLEAR MEDICINE 1997, V38(5), P177P

IT **7439-89-6D**, Iron, complexes conjugated with **radiopharmaceuticals**, biological studies **7439-96-5D**, Manganese, complexes conjugated with **radiopharmaceuticals**, biological studies **7440-54-2D**, Gadolinium, complexes conjugated with **radiopharmaceuticals**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

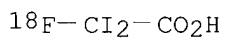
RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

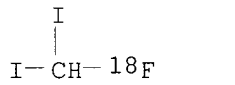
RN 7440-54-2 HCAPLUS
CN Gadolinium (8CI, 9CI) (CA INDEX NAME)

Gd

IT **220934-28-1P 220934-29-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)
RN 220934-28-1 HCAPLUS
CN Acetic acid, fluoro-18F-diiodo- (9CI) (CA INDEX NAME)



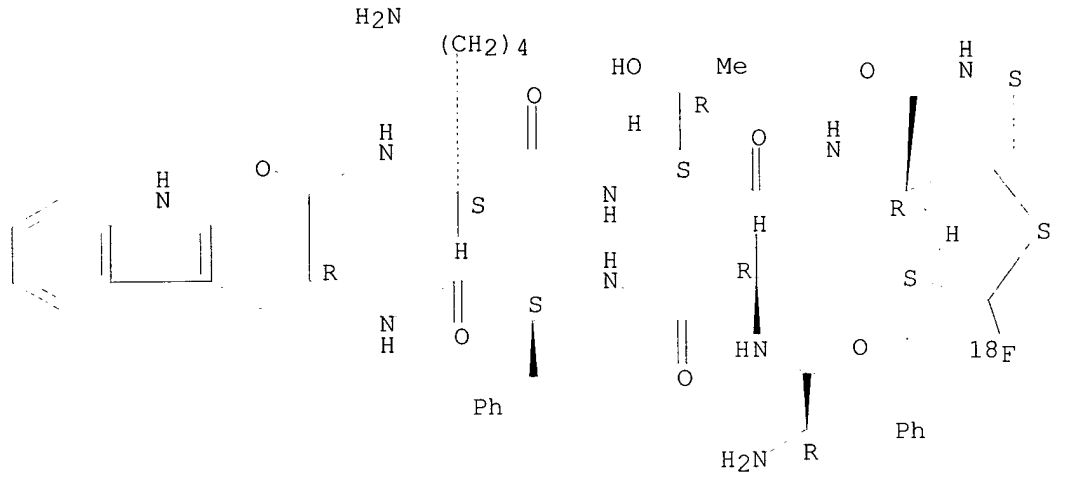
RN 220934-29-2 HCAPLUS
CN Methane, fluoro-18F-diiodo- (9CI) (CA INDEX NAME)



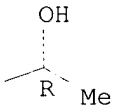
IT **220934-30-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)
RN 220934-30-5 HCAPLUS
CN L-Cysteinamide, D-phenylalanyl-S-(fluoro-18F-mercaptomethyl)-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[(1S,2R)-2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2.fwdarw.7)-thioether (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

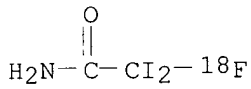


PAGE 1-B



OH

IT **220934-31-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)
RN 220934-31-6 HCAPLUS
CN Acetamide, 2-(fluoro-18F)-2,2-diiodo- (9CI) (CA INDEX NAME)



IT **220934-32-7 220934-33-8 220934-34-9**
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220934-38-3 220934-39-4 220934-40-7
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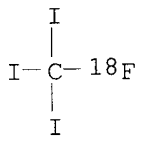
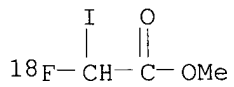
220934-47-4 220934-48-5 220934-49-6
220934-50-9 220934-51-0 220934-52-1
220934-53-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeling reagent; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)
RN 220934-32-7 HCAPLUS

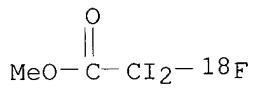
CN Methane, fluoro-18F-triiodo- (9CI) (CA INDEX NAME)



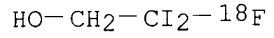
RN 220934-33-8 HCAPLUS
CN Acetic acid, fluoro-18F-iodo-, methyl ester (9CI) (CA INDEX NAME)



RN 220934-34-9 HCAPLUS
CN Acetic acid, fluoro-18F-diiodo-, methyl ester (9CI) (CA INDEX NAME)



RN 220934-35-0 HCAPLUS
CN Ethanol, 2-(fluoro-18F)-2,2-diiodo- (9CI) (CA INDEX NAME)



RN 220934-36-1 HCAPLUS
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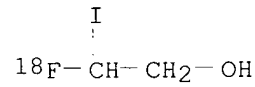

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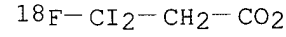

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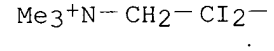

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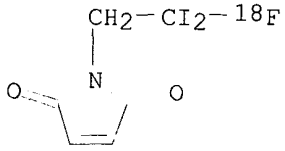

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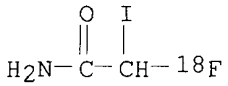

RN 220934-41-8 HCAPLUS
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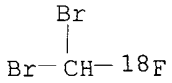

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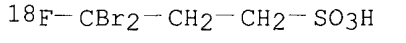

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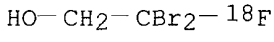

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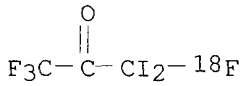

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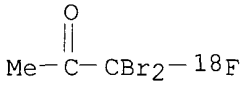

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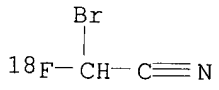

RN 220934-47-4 HCAPLUS
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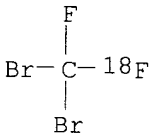

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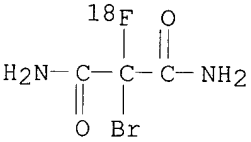

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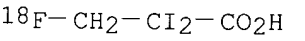

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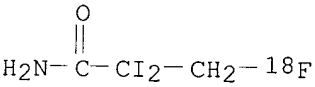

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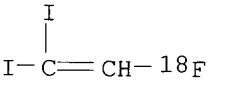

RN 220934-52-1 HCAPLUS
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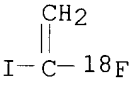

RN 220934-53-2 HCAPLUS

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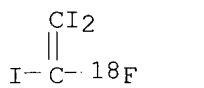

IT **67862-54-8**, Fluoride (**18F1**-)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; fluorination of **proteins** and **peptides** for **F-18** positron emission **tomog.**)
RN 67862-54-8 HCAPLUS
CN Fluoride (18F1-) (9CI) (CA INDEX NAME)

=> d all hitstr

L158 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:819263 HCAPLUS
DN 132:69307
TI Use of bispecific antibodies for pre-targeting diagnosis and therapy
IN Hansen, Hans J.; **Griffiths, Gary L.**; Leung, Shui-On; McBride, William J.; Qu, Zhengxing
PA **Immunomedics, Inc., USA**
SO PCT Int. Appl., 76 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K039-00
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 8, 9
FAN.CNT 14

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9966951	A2	19991229	WO 1999-US13879	19990622
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	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	AU 9945792	A1	20000110	AU 1999-45792	19990622
	EP 1089766	A2	20010411	EP 1999-928808	19990622
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002518460	T2	20020625	JP 2000-555637	19990622
PRAI	US 1998-90142P	P	19980622		
	US 1998-104156P	P	19981014		
	WO 1999-US13879	W	19990622		

OS MARPAT 132:69307
AB The present invention relates to a bispecific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue

and at least one other arm that specifically binds a targetable conjugate. The targetable conjugate comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bispecific antibody or antibody fragment. The targetable conjugate further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the bispecific antibodies or antibody fragments, as well as methods for using them.

ST immunotargeted drug delivery bispecific antibody diagnosis

IT Imaging agents
(MRI; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Diagnosis
(agents; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Chelating agents
Drug targeting
Genetic engineering
Molecular cloning
Radiotherapy
Test kits
Transcription initiation
Transduction, genetic
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Fusion proteins (chimeric proteins)
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT **Haptens**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Chelates
RL: FMU (Formation, unclassified); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Carbohydrates, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Peptides, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Radionuclides, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT Antibodies
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(bispecific; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Toxicity
(drug; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Immunoglobulins
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(fragments; bispecific antibodies for pre-targeting diagnosis and therapy)

IT Fissurella
(hemocyanin of, conjugation of; bispecific antibodies for pre-targeting

diagnosis and therapy)
IT Antibodies
RL: BPN (Biosynthetic preparation); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(humanized; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Drug delivery systems
(immunoconjugates; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Enzymes, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(immunoconjugates; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Drug delivery systems
(immunotargeted; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Hemocyanins
RL: RCT (Reactant); RACT (Reactant or reagent)
(keyhole limpet, conjugation of; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Antibodies
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(monoclonal; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Circulation
(nonlocalized antibody clearing from; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Drug delivery systems
(prodrugs; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Epitopes
(site-specific; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Milk
Plant (Embryophyta)
(transgenic protein prodn. in; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Animal
Bacteria (Eubacteria)
Insect (Insecta)
Mammal (Mammalia)
(transgenic; bispecific antibodies for pre-targeting diagnosis and therapy)
IT Embryo, animal
(zygote, transduction of; bispecific antibodies for pre-targeting diagnosis and therapy)
IT 9016-18-6D, Carboxylesterase, conjugates
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)
IT **253197-60-3P**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)
IT 10098-91-6, Yttrium 90, reactions 14133-76-7, Technetium 99, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(bispecific antibodies for pre-targeting diagnosis and therapy)

IT 249292-65-7DP, Bz-DTPA and thiosemicarbazonyloxyglyoxylcysteine conjugate
253197-63-6P 253331-44-1DP, peptide conjugate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(bispecific antibodies for pre-targeting diagnosis and therapy)

IT 67-43-6, Dtpa 56491-86-2, Nota 60239-18-1, Dota 60239-22-7, Teta
253197-61-4D, Thiosemicarbazonylglyoxylcysteine, derivs. and peptide conjugates 253197-62-5, Thiosemicarbazinylacetylcysteine
RL: BPR (Biological process); BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(chelating agent; bispecific antibodies for pre-targeting diagnosis and therapy)

IT 7440-42-8, Boron, biological studies 14798-12-0, Boron 10, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(irradn. of; bispecific antibodies for pre-targeting diagnosis and therapy)

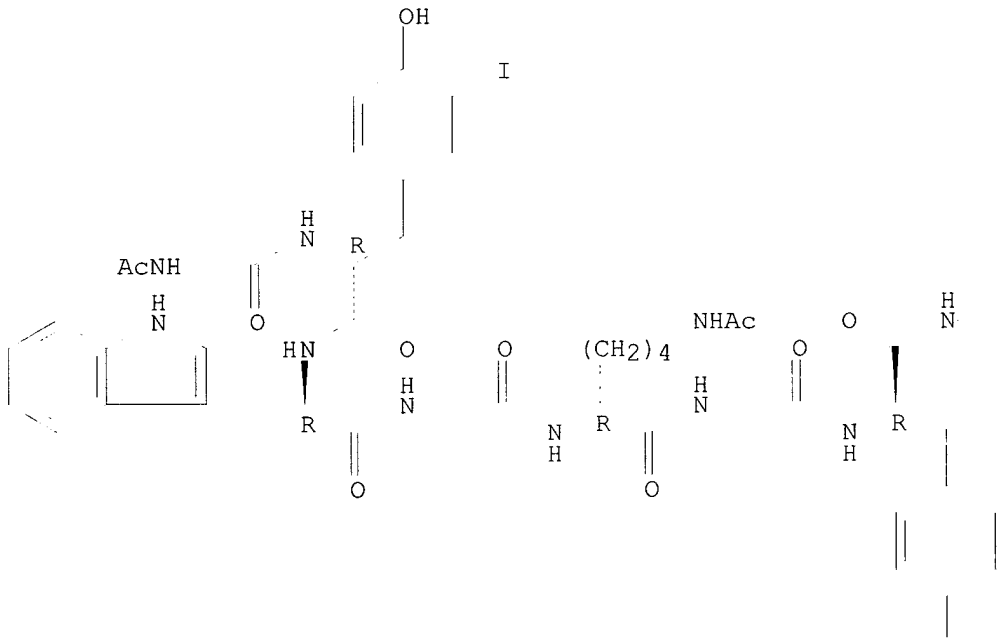
IT **253197-60-3P**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(bispecific antibodies for pre-targeting diagnosis and therapy)

RN 253197-60-3 HCAPLUS

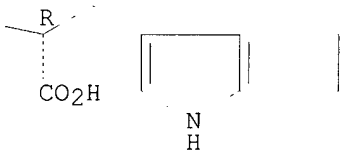
CN D-Tryptophan, N-acetylglycyl-3-iodo-D-tyrosyl-D-tryptophylglycyl-N6-acetyl-D-lysylglycyl-3-iodo-D-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



PAGE 2-A

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FILE 'REGISTRY' ENTERED AT 13:34:13 ON 08 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 7 MAR 2003 HIGHEST RN 497212-14-3
DICTIONARY FILE UPDATES: 7 MAR 2003 HIGHEST RN 497212-14-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d sqide can l155

L155 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 253197-60-3 REGISTRY

CN D-Tryptophan, N-acetylglycyl-3-iodo-D-tyrosyl-D-tryptophylglycyl-N6-acetyl-D-lysylglycyl-3-iodo-D-tyrosyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1: PN: WO9966951 PAGE: 61 claimed protein
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 8
NTE modified

type	------ location ------		description
terminal mod.	Gly-1	-	N-acetyl
modification	Tyr-2	-	iodo<I>
modification	Lys-5	-	acetyl<Ac>
modification	Tyr-7	-	iodo<I>

PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	WO9966951 claimed PAGE 61

SEQ 1 GYWGKGYW
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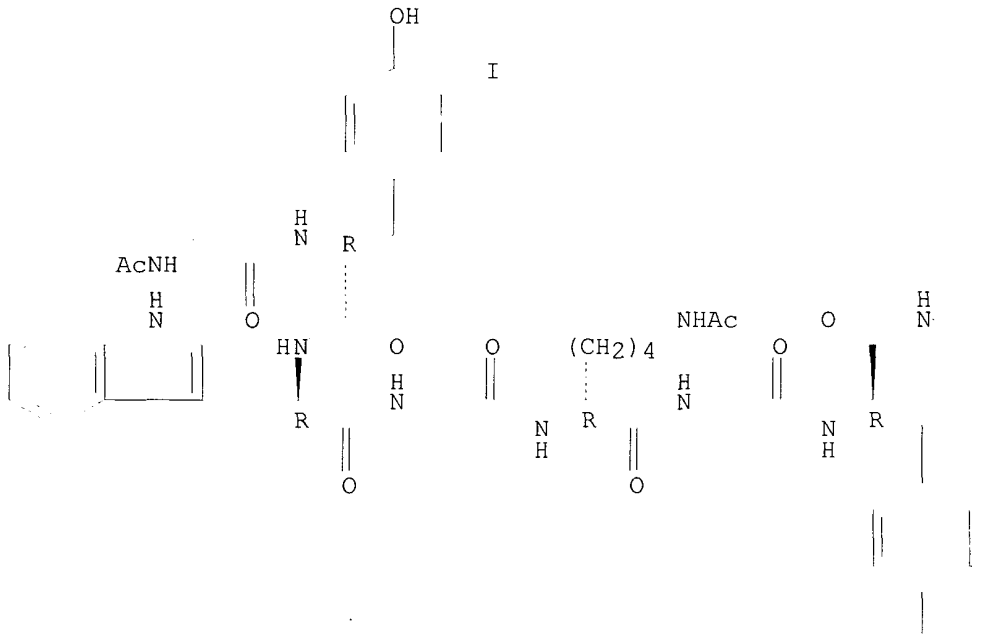
HITS AT: 1-8
MF C56 H63 I2 N11 O13
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

PAGE 1-A



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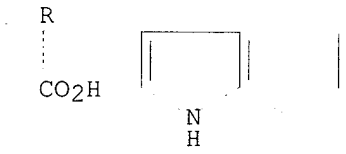

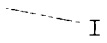

PAGE 2-A

OH

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 132:69307

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FILE 'HCAPLUS' ENTERED AT 13:34:30 ON 08 MAR 2003

FILE COVERS 1907 - 8 Mar 2003 VOL 138 ISS 11
FILE LAST UPDATED: 7 Mar 2003 (20030307/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d all hitstr tot l159

L159 ANSWER 1 OF 26  HCAPLUS  COPYRIGHT 2003 ACS
AN   1999:426944  HCAPLUS
DN   131:99520
TI   Labeled .alpha.-halogenoalkylaromatic amino acid and
     its application to a labeling reagent.
IN   Kawai, Keiichi
PA   Daiichi Radioisotope Laboratories, Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 12 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
IC   ICM  G21G004-08
     ICS  A61K051-00; C07C229-36; G01T001-161
CC   9-8 (Biochemical Methods)
     Section cross-reference(s): 2, 7, 14
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.   DATE
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PI   JP 11183696        A2   19990709       JP 1997-363838    19971218 <--
PRAI JP 1997-363838           19971218  <--
OS   MARPAT 131:99520
GI
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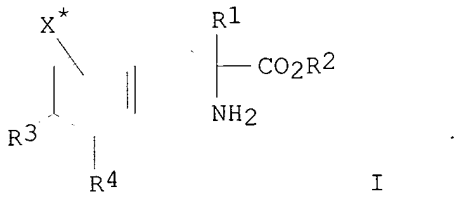


I

AB New labeling compds. are developed for imaging or quant. anal. of presynaptic functions essential for neurotransmission such as biosynthesis, storage and release of neurotransmitters. These compds. are labeled .alpha.-halogenoalkylarom. **amino acids** shown by I (R1=halogenoalkyl group; R2=hydrogen atom or low-grade alkyl group; R3 and R4=hydrogen atom or hydroxyl group with or without a protecting group, independently; and X*=**radiolabeled** halogen atom). Labeling reagents contg. these compds. as essential constituents are presented. Various basic properties of these compds. are studied in labeling tests, and their applications to positron-emission **tomog** . and single-photon-emission computed **tomog**. are shown.

```
ST   halogenoalkyl arom amino acid labeling
     neurotransmitter
IT   Biological transport
        (amino acid; labeled .alpha.-halogenoalkylarom.
        amino acid and application to a labeling reagent)
IT   Metabolism
        (anabolic; labeled .alpha.-halogenoalkylarom. amino
        acid and application to a labeling reagent)
IT   Amino acids, biological studies
     RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); THU
     (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES
     (Uses)
```

(arom., **radiolabeled**, .alpha.-halogenoalkyl, salts of; labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT Biological transport
(efflux; labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT Blood analysis
Blood plasma
Brain
Diagnosis
Imaging
Kidney
Liver
Neurotransmission
Pancreas
Positron-emission tomography
Single-photon-emission computed tomography
Storage
Therapy
Urine analysis
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT Neurotransmitters
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT Analysis
(quant. anal.; labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 60-18-4, L-Tyrosine, biological studies 630-60-4, Ouabain 637-33-2, 3-Hydroxybenzylhydrazine 69955-03-9, .alpha.-Difluoromethyldopa
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 9042-64-2, Aromatic L-**amino acid** decarboxylase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 60-18-4D, L-Tyrosine, labeled with iodine 125, biological studies 82691-33-6D, N-Isopropyl-p-iodoamphetamine, labeled with iodine 123
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 230617-39-7DP, labeled with iodine 125 or 123 230617-40-0DP, labeled with iodine 125
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 10043-66-0, Iodine 131, uses **13981-56-1**, Fluorine 18, uses 14158-30-6, Iodine 124, uses 14158-31-7, Iodine 125, uses 15715-08-9, Iodine 123, uses 15765-38-5, Bromine 76, uses
RL: NUU (Other use, unclassified); USES (Uses)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 3417-91-2, Tyrosine methylester hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT 153711-34-3P 153711-36-5P 230617-39-7P 230617-40-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

IT **13981-56-1**, Fluorine 18, uses
RL: NUU (Other use, unclassified); USES (Uses)
(labeled .alpha.-halogenoalkylarom. **amino acid** and application to a labeling reagent)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1999:194032** HCAPLUS

DN **130:234067**

TI Imaging agents for early detection and monitoring of cardiovascular plaque

IN Elmaleh, David R.; Fischman, Alan J.; Babich, John W.

PA The General Hospital Corporation, USA

SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K051-08
ICS A61K051-12; A61K051-10

CC 8-9 (**Radiation** Biochemistry)
Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9912579	A1	19990318	WO 1998-US18685	19980908 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2302837	AA	19990318	CA 1998-2302837	19980908 <--
	AU 9893074	A1	19990329	AU 1998-93074	19980908 <--
	EP 1011738	A1	20000628	EP 1998-945939	19980908 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1997-925213	A	19970908 <--		
	WO 1998-US18685	W	19980908		

AB The invention provides imaging agents comprising a label in assocn. with a plaque specific targeting mol. Methods for using the imaging agents to diagnose or monitor plaque formation and growth and kits contg. the cardiovascular agents or components suitable for prodn. of the imaging agents are also provided.

ST imaging agent cardiovascular plaque

IT Diagnosis
(agents; imaging agents for early detection and monitoring of cardiovascular plaque)

IT Drug targeting
Infection
Inflammation
(cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)

IT **Radionuclides**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)

IT **Peptides**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chemotactic, targeting moiety; cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)

IT **Radiology**
(diagnostic; imaging agents for early detection and monitoring of cardiovascular plaque)

IT Cardiovascular system
(disease; imaging agents for early detection and monitoring of cardiovascular plaque)

IT Atherosclerosis
Cardiovascular system
Chelating agents
Imaging agents
Reducing agents
Test kits
Thrombus
(imaging agents for early detection and monitoring of cardiovascular plaque)

IT Leukocyte
(targeting moiety; cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)

IT **Antibodies**
Proteins, general, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(targeting moiety; cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)

IT 69-65-8, Mannitol 87-69-4, Tartaric acid, uses 526-95-4, D-Gluconic acid 23351-51-1, Glucoheptonic acid
RL: MOA (Modifier or additive use); USES (Uses)
(imaging agents for early detection and monitoring of cardiovascular plaque)

IT 14133-76-7DP, Technetium 99, imaging agents labeled with, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(imaging agents for early detection and monitoring of cardiovascular plaque)

IT **13981-56-1D**, Fluorine 18, imaging agents labeled with, biological studies 14276-53-0D, Copper 62, imaging agents labeled with, biological studies 15715-08-9D, Iodine 123, imaging agents labeled with, biological studies 15750-15-9D, Indium 111, imaging agents labeled with, biological studies 15757-14-9D, Gallium 68, imaging agents labeled with, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(imaging agents for early detection and monitoring of cardiovascular plaque)

IT 7440-31-5D, Tin, complexes with glucoheptonic acid, reactions 23288-61-1 23351-51-1D, tin complexes 133081-26-2 134314-57-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; imaging agents for early detection and monitoring of cardiovascular plaque)

IT 7440-31-5D, Tin, compds., uses
RL: MOA (Modifier or additive use); USES (Uses)
(reducing agents; imaging agents for early detection and monitoring of cardiovascular plaque)

IT 59880-97-6
RL: BSU (Biological study, unclassified); BIOL (Biological study) (targeting moiety; cardiovascular imaging agent comprising a **radionuclide** assocd. with a targeting moiety, an infection-sp. agent)
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Australian Nuclear Science Tec; WO 9102547 A 1991 HCAPLUS
(2) Babich, J; NUCLEAR MEDICINE AND BIOLOGY 1995, V22(1), P25 HCAPLUS
(3) Dinkelborg, L; WO 9710853 A 1997 HCAPLUS
(4) Dinkelborg, L; J NUCL MED 1997, V38(suppl), P173
(5) Dinkelborg, L; J NUCL MED 1998, V39(10), P1819 MEDLINE
(6) Du Pont Merck Pharma; WO 9631243 A 1996 HCAPLUS
(7) Gen Hospital Corp; WO 9511045 A 1995 HCAPLUS
(8) Hom, R; NUCLEAR MEDICINE AND BIOLOGY 1997, V24(6), P485 HCAPLUS
(9) Immunomedics Inc; EP 0419203 A 1991 HCAPLUS
(10) Liu, S; APPLIED RADIATION AND ISOTOPES 1997, V48(8), P1103 HCAPLUS
(11) Mahmood, A; NUCLEAR MEDICINE AND BIOLOGY 1996, V23(1), P79 HCAPLUS
(12) Neorx Corp; WO 9010463 A 1990 HCAPLUS
(13) Resolution Pharm Inc; WO 9503280 A 1995 HCAPLUS
(14) Resolution Pharm Inc; WO 9506633 A 1995 HCAPLUS
(15) Rhomed Inc; WO 9312819 A 1993 HCAPLUS
(16) Vaidyanathan, G; NUCLEAR MEDICINE AND BIOLOGY 1995, V22(6), P759 HCAPLUS
(17) Welling, M; NUCLEAR MEDICINE AND BIOLOGY 1997, V24(7), P649 HCAPLUS
IT **13981-56-1D**, Fluorine 18, imaging agents labeled with, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (imaging agents for early detection and monitoring of cardiovascular plaque)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:360374** HCAPLUS
DN **125:52419**
TI A comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochemical conjugation
AU Wester, Hans-Juergen; Hamacher, Kurt; Stoecklin, Gerhard
CS Institut Nuklearchemie, Forschungszentrum Juelich Gmbh, Juelich, D-52425, Germany
SO Nuclear Medicine and Biology (**1996**), 23(3), 365-372
CODEN: NMBIEO; ISSN: 0883-2897
PB Elsevier
DT Journal
LA English
CC 8-1 (**Radiation** Biochemistry)
AB Three methods for 18F-labeling of **proteins** were evaluated with respect to conjugation yields, suitability for remote-controlled routine synthesis, and in vivo stability of the conjugates, i.e., photochem. conjugation (PCC) using 4-azidophenacyl-[18F]fluoride ([18F]APF) as well as classical conjugation using 4-nitrophenyl 2-[18F]fluoropropionate ([18F]NPFP) and N-succinimidyl 4-[18F]fluorobenzoate ([18F]SFB). For this purpose, [18F]APF was synthesized in one step with a **radiochem.** yield (RCY) of up to 70% within about 15 min. The 18F-labeling was performed by photogeneration of the corresponding [18F]arylnitrene by irradiating [18F]APF with UV light in presence of the **protein** in aq. buffered soln. Using this procedure, human serum albumin (HSA), transferrin, IgG, and avidin were labeled. The [18F]NPFP was synthesized

according to a recently published method. **Prepn.** of [18F]SFB was achieved within 35 min with **radiochem.** yields of 55 .+-. 10% by an improved method using O-(N-succinimidyl)-N-N,N',N'-tetramethyluronium tetrafluoroborate (TSTU) as activating reagent. Compared to [18F]APF, **protein** labeling with [18F]NPFP and [18F]SFB gave rise to considerably higher RCY, of up to 90%. Labeling studies showed that conjugation yields using [18F]NPFP depend on the lysine, tyrosine, and histidine content of the **proteins** used, whereas conjugation with [18F]APF and [18F]SFB predominantly depends on the Lys content. Owing to competing O-acylation of Tyr residues, [18F]fluoropropionylated HSA was partially unstable under slightly basic conditions. Biodistribution studies with 18F-labeled HSA in NMRI mice revealed the highest in vivo stability for the [18F]SFB conjugate. Based on these results, [18F]SFB seems to be the most suitable 18F-labeling agent for **proteins**, particularly for the labeling of **antibodies**.

ST fluorine 18 labeling **protein** acylation; photochem conjugation fluorine 18 **antibody**

IT Acylation
(comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT Albumins, reactions
Antibodies
Avidins
Proteins, reactions
Transferrins
RL: RCT (Reactant); RACT (Reactant or reagent)
(comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT Conjugation
(photochem.; comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT Immunoglobulins
RL: RCT (Reactant); RACT (Reactant or reagent)
(G, comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT **13981-56-1**, Fluorine 18, reactions 178273-74-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT 141762-27-8P 178273-73-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

IT **13981-56-1**, Fluorine 18, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(comparative study of n.c.a. fluorine-18 labeling of **proteins** via acylation and photochem. conjugation)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1996:334561** HCAPLUS

DN **125:80556**

TI The carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine

AU Wester, Hans Juergen

CS Inst. Nuclearchem., Forschungszent. Juelich G.m.b.H., Juelich, D-52425, Germany
SO Berichte des Forschungszentrums Juelich (**1996**), Juel-3206, 1-157 pp.
CODEN: FJBEE5; ISSN: 0366-0885
DT Report
LA German
CC 8-1 (**Radiation** Biochemistry)
AB The nucleic properties of 18F for noninvasive diagnosis with positron emission **tomog.** (**PET**), 18F-fluorination procedures via prosthetic group labeling, and subsequent conjugation were investigated and compared with respect to synthesis time, **radiochem.** yield, suitability for automation, in vivo stability, and preservation of the biol. activity of the labeled biomols. Three methods were investigated: acylation by N-succinimidyl 4-[18F]fluorobenzoate ([18F]SFB), by nitrophenyl 2-[18F]fluoropropionate ([18F]NPFP), and photochem. conjugation by 4-azidophenayl [18F]fluoride ([18F]APF). Compared to [18F]APF, **protein** labeling with [18F]SFB gave rise to considerable **radiochem.** yield of up to 90%. The conjugation yields by [18F]NPFP in the presence of 1-hydroxybenzotriazole depend on the relative Lys, Tyr, and His content of the **proteins** used, whereas photochem. conjugation with [18F]APF, as well as acylation with [18F]SFB, predominantly depended on the Lys content. The applicability of these methods so smaller bioactive **peptides** was demonstrated. As a potential tracer for the cerebral **amino acid** transport system, O-(2[18F]fluoroethyl)-Tyr was **prepd.** by O-2-[18F]fluoproethylation of fully protected Tyr and unprotected tyr by 2-[18F]fluoroethyltosylate with a **radiochem.** yield of 35-39%. The tracer showed high and continuous uptake in mice brain reaching 2.5% injected dose/g at 60 min and exhibited high in vivo stability.
ST fluorine 18 fluorination **protein peptide** tyrosine
IT Brain
(carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine)
IT Avidins
Transferrins
RL: RCT (Reactant); RACT (Reactant or reagent)
(carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine)
IT Albumins, biological studies
Amino acids, biological studies
Peptides, biological studies
Proteins, biological studies
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine)
IT Immunoglobulins
RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(G, carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine)
IT **Tomography**
(**positron-emission**, carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine for potential **PET**)
IT Fluorination
(**radiochem.**, carrier-free 18F-fluorination of **proteins, peptides**, and tyrosine)
IT 56-41-7, Alanine, biological studies 61-90-5, Leucine, biological studies 63-91-2, Phenylalanine, biological studies 70-78-0, 3-Iodotyrosine 672-87-7 6230-11-1 24250-85-9 51110-01-1, Somatostatin 65555-88-6

RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

IT **13981-56-1**, Fluorine-18, biological studies
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

IT 56-45-1, Serine, reactions 72-19-5, Threonine, reactions 583-52-8 584-08-7 2592-95-2 24345-16-2, Apamine 57018-46-9 113426-12-3 124915-06-6 159174-30-8 178432-96-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

IT 50-99-7DP, D-(+)-Glucose, SMS 201-995 conjugates 59-23-4DP, D-(+)-Galactose, SMS 201-995 conjugates 63-42-3DP, SMS 201-995 conjugates 69-79-4DP, SMS 201-995 conjugates 619-84-1P 1109-28-0DP, D-Maltotriose, SMS 201-995 conjugates 4326-36-7P 10011-97-9P 14809-53-1DP, Yttrium 86, SDZ 215-811 complexes, **preparation** 15750-15-9DP, Indium 111, SMA 215-811 complexes, **preparation** 15757-14-9DP, Gallium 68, SDZ 216-927 complexes, **preparation** 83150-76-9DP, Sms 201-995, sugar conjugates 83150-76-9P, Sms 201-995 138661-02-6DP, SDZ 215-811, indium-111 and yttrium-86 complexes 147790-82-7DP, Sdz 216-927, gallium-68 complexes 178602-43-2P 178602-44-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

IT 56-87-1P, L-Lysine, **preparation** 60-18-4P, Tyrosine, **preparation** 71-00-1P, Histidine, **preparation** 19121-31-4P, Hydrofluoric-18F acid 124915-09-9P 141762-27-8P 159174-29-5DP, human serum albumin conjugates 178273-73-9P 178432-97-8P 178432-98-9DP, IgG conjugates 178432-99-0P 178433-00-6P 178433-01-7P 178433-02-8P 178433-03-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

IT **13981-56-1**, Fluorine-18, biological studies
RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(carrier-free 18F-fluorination of **proteins**, **peptides**, and tyrosine)

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:264078** HCAPLUS
DN **125:52422**
TI On the low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups
AU Guhlke, Stefan
CS Inst. Nuklearchem., Forschungszent. Juelich G.m.b.H., Juelich, D-52425, Germany
SO Berichte des Forschungszentrums Juelich (**1995**), Juel-3136, 1-135
CODEN: FJBEE5; ISSN: 0366-0885

DT Report
LA German
CC 8-1 (**Radiation** Biochemistry)
AB 18F-fluoroacylation and 18F-fluoroamidation were studied for no-carrier-added (n.c.a.) labeling of **peptides** and **proteins**. Following deprotection, formation of imidazolides, succinimide esters or nitrophenyl esters as reactive intermediates were investigated. A route to p-nitrophenylesters via 18F-fluorinated acid chloride was developed. The activity of the 18F-labeled acylation agents towards amines with different steric hindrance and basicities was compared. Even with low reactive aniline deriv. almost quant. formation of the corresponding 18F-fluorinated amides was obsd. The somatostatin analog octreotide was selectively 18F-fluoroacylated at the N-terminus of the cyclic **octapeptide** by the .epsilon.-Lys-Boc protected precursor. Binding studies with the non-**radioactive** fluoropropionylated std. compd. and rat cortex membranes revealed high affinity (pKi = 8.6) to the somatostatin receptor and almost unchanged biol. activity compared to the native octreotide. For 18F-fluoroamidation, Boc-protected amines were used as precursors in the n.c.a. nucleophilic fluorination step. 3-[18F]fluoropropylamine was optimal for 18F-fluoroamidation (**radiochem**. yield >90%) and reactivity towards acylation agents. Thus derivs. of biotin were labeled with **radiochem**. yields (>70%) by 18F-fluoroacylation as well as 18F-fluoroamidation. Both methods led to labeled compds. with full biol. activity as shown by their binding ability to the **protein** avidin. Avidin was labeled by the 18F-fluoroacylation method, preservation of the biol. activity was proved by affinity chromatog.
ST positron emission **tomog radiofluorination** **peptide**; fluorine 18 labeling **protein**; biotin avidin octreotide **radiofluorination**
IT Kinetics, reaction
(low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT **Peptides**, biological studies
Proteins, specific or class, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT Acylation
(fluoro-, low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT Fluorination
(**radiochem**., low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT 349-43-9 405-56-1 406-74-6 430-98-8 451-46-7 458-77-5 459-72-3 640-19-7 2366-56-5 66134-67-6 114435-94-8 133745-74-1 159174-17-1 159761-96-3 178181-30-1 178181-31-2 178181-32-3 178181-33-4 178181-34-5 178181-35-6 178181-36-7 178181-37-8 178181-39-0 178181-40-3 178181-41-4 178181-42-5 178181-43-6 178181-44-7 178181-45-8 178181-46-9 178181-47-0 178181-48-1 178181-49-2 178181-50-5 178181-51-6 178181-52-7 178181-53-8 178181-54-9 178181-55-0 178181-56-1 178181-57-2 178181-58-3
RL: ANT (Analyte); ANST (Analytical study)
(low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT 2620-14-6 3017-53-6 17282-40-5 34005-60-2, Calcium p-nitrophenolate 36752-79-1 39684-80-5 41145-84-0 57057-80-4 **67862-54-8**, Fluoride (18F1-) 74209-95-3 83948-53-2 124915-06-6 140384-48-1 178181-59-4 178181-60-7 178181-61-8 178181-62-9 178181-63-0 178181-64-1 178181-65-2 178181-66-3 178181-67-4 178181-68-5 178181-69-6
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)

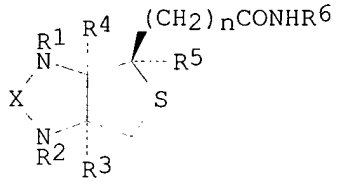
(low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
IT **67862-54-8**, Fluoride (18F1-)
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(low carrier **radiofluorination** of **peptides** and **proteins** by prosthetic groups)
RN 67862-54-8 HCAPLUS
CN Fluoride (18F1-) (9CI) (CA INDEX NAME)

$^{18}F^-$

L159 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:130877** HCAPLUS
DN **124:185559**
TI Biotin compounds for targeting tumors and sites of infection
IN Elmaleh, David R.; Fischman, Alan J.; Shoup, Timothy M.; Babich, John W.
PA USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K047-48
ICS A61K051-04
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 9
FAN.CNT 1

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	WO 9533491	A1	19951214		WO 1995-US7184	19950605	<--
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT						
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG						
	CA 2192384	AA	19951214		CA 1995-2192384	19950605	<--
	AU 9526991	A1	19960104		AU 1995-26991	19950605	<--
	AU 700864	B2	19990114				
	EP 769966	A1	19970502		EP 1995-922233	19950605	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE						
	JP 10508003	T2	19980804		JP 1995-501283	19950605	<--
	US 5716594	A	19980210		US 1996-725060	19961002	<--
	AU 9923742	A1	19990722		AU 1999-23742	19990413	<--
	AU 743255	B2	20020124				
PRAI	US 1994-254260	A	19940606	<--			
	US 1994-265516	A	19940624	<--			
	AU 1995-26991	A3	19950605	<--			
	US 1995-461622	B1	19950605	<--			
	WO 1995-US7184	W	19950605	<--			

OS MARPAT 124:185559
GI



I

AB A compn. for targeting therapeutic and imaging agents to sites of infection and tumors comprises biotin amide analogs (I; R1-5 = H, acyl, alkyl, alkylene, alkenylene, alkynylene, alkenyl, alkynyl; R6 = H, acyl, alkyl, alkylene, alkenylene, alkynylene, alkenyl, alkynyl, conjugated diagnostic or therapeutic agents; X = C:O, S:O, C:NH; n = 2-10). Two 18F-labeled biotin analogs were **prepd**. and their tissue distribution was studied in Escherichia coli-infected rats.

ST **radiolabeled** biotin analog diagnostic therapeutic; infection tumor targeting biotin analog

IT Hormones
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antagonists; pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Nucleotides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemotherapeutic; pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Escherichia coli
(infections; pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Antimalarials
Infection
Malaria
Neoplasm
Pharmaceutical dosage forms
Tuberculosis
Tuberculostatics
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT **Peptides**, biological studies
Proteins, biological studies
Radioelements, biological studies
Toxins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT **Tomography**
(**NMR, contrast agents**, pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Imaging
(agents, pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT **Tomography**
(contrast agents, pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Transition metal compounds
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(heavy, complexes, pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)

IT Nucleotides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(oligo-, pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
IT 159761-96-3P 159761-97-4P 159761-99-6P 159762-00-2P
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
IT 58-85-5, (+)-Biotin 53906-36-8, (+)-Biotinol **67862-54-8**, Fluoride (18F1-) 173923-84-7 173923-85-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
IT 7440-42-8D, Boron, compds. **13981-56-1**, Fluorine 18, biological studies 14119-09-6, Gallium 67, biological studies 14133-76-7, Technetium 99, biological studies 14158-31-7, Iodine 125, biological studies 15715-08-9, Iodine 123, biological studies 15750-15-9, Indium 111, biological studies 15757-14-9, Gallium 68, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
IT **67862-54-8**, Fluoride (18F1-)
RL: RCT (Reactant); RACT (Reactant or reagent)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
RN 67862-54-8 HCAPLUS
CN Fluoride (18F1-) (9CI) (CA INDEX NAME)

^{18}F-

IT **13981-56-1**, Fluorine 18, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical compns. contg. biotin compds. for targeting tumors and sites of infection)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1995:935259** HCAPLUS
DN **124:49649**
TI Fluorine-18-labeled monoclonal **antibodies** for positron emission **tomographic** imaging
AU Zalutsky, Michael R.; Vaidyanathan, Ganesan; Garg, Pradeep; Page, Rodney L.
CS Medical Center, Duke University, Durham, NC, USA
SO Handbook of Targeted Delivery of Imaging Agents (**1995**), 665-91. Editor(s): Torchilin, Vladimir P. Publisher: CRC, Boca Raton, Fla. CODEN: 61XQA8
DT Conference
LA English
CC 8-9 (**Radiation** Biochemistry)
AB **PET** using 18F-labeled monoclonal **antibodies** is discussed. Labeling procedures, biodistribution studies and imaging efficacy are detailed.
ST **PET** fluorine 18 monoclonal **antibody**
IT **Antibodies**

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(monoclonal, fluoro derivs., labeled with fluorine-18; fluorine-18-labeled monoclonal **antibodies** for positron emission **tomog.** imaging)

IT **Tomography**
(**positron-emission**, fluorine-18-labeled monoclonal **antibodies** for **positron emission tomog.** imaging)

IT **13981-56-1DP**, Fluorine 18, monoclonal **antibodies** labeled with, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(fluorine-18-labeled monoclonal **antibodies** for positron emission **tomog.** imaging)

IT **13981-56-1DP**, Fluorine 18, monoclonal **antibodies** labeled with, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(fluorine-18-labeled monoclonal **antibodies** for positron emission **tomog.** imaging)

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:600400** HCAPLUS
DN **121:200400**
TI Thrombus detection using **radiolabeled** disintegrins
IN Knight, Linda C.; Maurer, Alan H.
PA Temple University of the Commonwealth System of Higher Education, USA
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K013-00
ICS A61K049-02
CC 9-8 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9409036	A1	19940428	WO 1993-US9523	19931005 <--
	W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5380646	A	19950110	US 1992-965674	19921019 <--
	CA 2147273	AA	19940428	CA 1993-2147273	19931005 <--
	AU 9453215	A1	19940509	AU 1994-53215	19931005 <--
	EP 679162	A1	19951102	EP 1993-923267	19931005 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08502480	T2	19960319	JP 1993-510101	19931005 <--
PRAI	US 1992-965674		19921019 <--		
	WO 1993-US9523		19931005 <--		

AB **Radiolabeled polypeptides** derived from the Viperidae

disintegrins are provided as well as a method for the detection of venous and arterial thrombi, pulmonary emboli and tumors or abscesses that have a thrombus component. Compns. suitable for parenteral administration comprising the **radiolabeled polypeptides** and a pharmaceutically acceptable carrier are also provided. **Radiolabeled** disintegrins have low affinity for binding normal vascular endothelia and exhibit low uptake by lung and liver tissue. The latter permits effective imaging of pulmonary emboli. Deep venous thrombi are clearly visible following administration of the **radiolabeled** disintegrin. Using 123I-labeled bitistatin, imaging was possible as soon as 12 min post-injection. In contrast to most **radiotracers**, the **radiolabeled peptides** of the invention bound to both actively forming and pre-formed thrombi.

ST Viperidae disintegrin **radiolabeled** thrombus imaging

IT Abscess
Neoplasm
(thrombus-assocd., imaging of, **radiolabeled** Viperidae disintegrins for)

IT Thrombus and Blood clot
(venous and arterial, imaging of, **radiolabeled** Viperidae disintegrins for)

IT **Radiography**
(contrast agents, for thrombus detection, **radiolabeled** Viperidae disintegrins for)

IT **Proteins**, specific or class
RL: ANST (Analytical study)
(disintegrins, Viperidae, **radiolabeled**, for imaging of thrombi)

IT Lung, disease
(embolism, imaging of, **radiolabeled** Viperidae disintegrins for)

IT 10043-66-0, Iodine-131, uses **13981-56-1**, Fluorine-18, uses 14119-09-6, Gallium-67, uses 14133-76-7, Technetium-99, uses 14158-31-7, Iodine-125, uses 14885-78-0, Indium-113, uses 15715-08-9, Iodine-123, uses 15750-15-9, Indium-111, uses 15757-14-9, Gallium-68, uses 15765-38-5, Bromine-76, uses
RL: USES (Uses)
(Viperidae disintegrins labeled with, for **radioimaging** of thrombi)

IT 118337-11-4D, Echistatin .alpha.1 (reduced), **radiolabeled** 124542-99-0D, Applaggin (Agkistrodon piscivorus piscivorus subunit reduced), **radiolabeled** 127829-86-1D, Kistrin (reduced), **radiolabeled** 129202-41-1D, Bitistatin 3 (Bitis arietans reduced), **radiolabeled** 130357-67-4D, Batroxostatin (Bothrops atrox venom reduced), **radiolabeled** 133648-00-7D, Albolabrin (Trimeresurus albolabris), **radiolabeled** 133924-16-0D, **radiolabeled** 157938-45-9D, Bitistatin 1 (Bitis arietans), **radiolabeled** 157938-46-0D, Bitistatin 4 (Bitis arietans), **radiolabeled** 157938-47-1D, Trigramin (Trimeresurus gramineus), **radiolabeled** 157938-48-2D, Eristostatin (reduced), **radiolabeled** 157938-49-3D, Agkistrostatin (Agkistrodon piscivorus), **radiolabeled** 157938-50-6D, Elegantin (Trimeresurus elegans), **radiolabeled** 157938-51-7D, Flavoridin (Trimeresurus flavoviridis), **radiolabeled**
RL: ANST (Analytical study)
(for thrombus imaging)

IT **13981-56-1**, Fluorine-18, uses
RL: USES (Uses)
(Viperidae disintegrins labeled with, for **radioimaging** of thrombi)

RN 13981-56-1 HCAPLUS

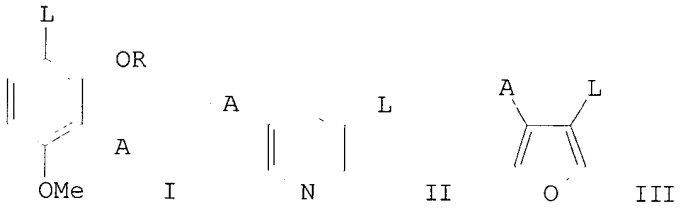
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:404528** HCAPLUS
DN **121:4528**
TI **Radiohalogenation** conjugate technology
IN Zalutsky, Michael R.; Narula, Acharan S.
PA Duke University, USA
SO U.S., 13 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07K015-28
ICS C07K017-02; A61K049-02
NCL 530391500
CC 9-14 (Biochemical Methods)
Section cross-reference(s): **8**, 15, 27, 28, 29
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5302700	A	19940412	US 1988-197246	19880523 <--
PRAI US 1988-197246		19880523 <--		

OS MARPAT 121:4528
GI



AB Compds. I, II, III [L = succinimidyl type linking group or -C(O)CH:CH2; A = -Sn(n-C4H9)3, -Sn(CH3)3, HgCl, N2+; R = H, Me, mono-, di- or oligosaccharide] are provided. The compds. are site-specifically halogenated or **radiohalogenated** at the A group and coupled with macromols. such as monoclonal **antibodies, peptides** or other **proteins**. N-succinimidyl-5-tri-n-butylstannyl-3-pyridine carboxylate (SPC) was synthesized in 3 steps from 5-bromo-3-pyridine carboxylic acid and then **radioiodinated** with Na[125I]. The **radioiodinated** SPC was coupled to monoclonal **antibody** -110. The affinity const. of the **radiolabeled** monoclonal **antibody** for carcinoembryonic antigen was 1.25 .times. 109M-1. Use of the SPC method for **radioiodinating antibodies** decreased the thyroid uptake of **radioidine** when compared to conventional procedures.
ST **radiohalogenation** macromol succinimidylpyridine carboxylate compd; monoclonal **antibody radioiodination; protein radiohalogenation; peptide radiohalogenation**
IT Pharmacokinetics
(of succinimidylradioiodopyridine carboxylate **protein** conjugates, in vivo)
IT Macromolecular compounds

Peptides, reactions
Proteins, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radiohalogenation** of, compds. for)

IT Thyroid gland, metabolism
(**radioiodine** uptake by, monoclonal **antibody** **radioiodination** with succinimidyliodopyridine carboxylate compd. in relation to)

IT Antigens
RL: ANST (Analytical study)
(CEA (carcinoembryonic antigen), monoclonal **antibody**-110 to, **radioiodination** of)

IT **Antibodies**
RL: RCT (Reactant); RACT (Reactant or reagent)
(monoclonal, **radiohalogenation** of, compds. for)

IT 122452-56-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and (**radio**)halogenation of)

IT 131865-59-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and **radiohalogenation** of, for **radiohalogenating** macromols.)

IT 155560-21-7P 155560-22-8P 155560-24-0P 155560-25-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and reaction of)

IT 39503-50-9P 63638-85-7P, 3-Bromo-2-hydroxy-4-methoxybenzaldehyde 122452-57-7P 122452-58-8P 122452-59-9P, 3-Bromo-2,4-dimethoxybenzaldehyde 122452-60-2P 122507-19-1P 131865-56-0P 131865-57-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and reaction of, in **prepn.** of compd. for **radiohalogenating** macromols.)

IT 3153-76-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and reaction of, with hydroxysuccinimide)

IT 130168-13-7P 131865-61-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of)

IT 131865-63-9P 153694-31-6DP, reaction products with monoclonal **antibody**-110 to carcinoembryonic antigen
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of and carcinoembryonic antigen binding affinity for)

IT 153694-31-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of and monoclonal **antibody**-110 **radioiodination** with)

IT 155560-26-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, for **radioiodinating** macromols.)

IT 7553-56-2, Iodine, reactions 7726-95-6, Bromine, reactions 7782-41-4, Fluorine, reactions 7782-50-5, Chlorine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radioactive**, reactive compd. **radiolabeling** with, for **radiolabeling** macromols.)

IT 155560-20-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radiohalogenation** of, for **radiohalogenating** macromols.)

IT 673-22-3, 2-Hydroxy-4-methoxybenzaldehyde 20826-04-4, 5-Bromo-3-pyridine carboxylic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in **prepn.** of compd. for **radiohalogenating** macromols.)
IT 10043-66-0, Iodine-131, reactions **13981-56-1**, Fluorine-18, reactions 14158-31-7, Iodine-125, reactions 14809-47-3, Bromine-75, reactions 15715-08-9, Iodine-123, reactions 15755-39-2, Astatine-211, reactions 15765-38-5, Bromine-76, reactions 15765-39-6, Bromine-77, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactive compd. **radiolabeling** with, for **radiolabeling** macromols.)
IT **13981-56-1**, Fluorine-18, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactive compd. **radiolabeling** with, for **radiolabeling** macromols.)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:503323** HCAPLUS
DN **119:103323**
TI Diagnosis and treatment of cancer with epidermal growth factor conjugates
IN Leung, Frederick C.; Fisher, Darrell R.; Thompson, Michael R.; Harvey, Scott D.
PA Battelle Memorial Institute, USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K049-00
ICS A61K043-00
CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 1, **8**
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9309816	A1	19930527	WO 1992-US9874	19921116	<--
	W: AU, BR, CA, JP, KP, KR, NO, PL, RU, US					
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE					
	AU 9331778	A1	19930615	AU 1993-31778	19921116	<--
	EP 614377	A1	19940914	EP 1993-900522	19921116	<--
	R: DE, DK, FR, GB, IT, SE					
	JP 07501332	T2	19950209	JP 1992-509460	19921116	<--
PRAI	US 1991-792181		19911114	<--		
	WO 1992-US9874		19921116	<--		

AB Epidermal growth factor (EGF) conjugates are used for diagnosis and treatment of cancer. The conjugates are with .alpha.-emitting **radionuclides**, non-**radioactive** I, oxyanion of a metal and a **radioactive** isotope. Murine EGF was treated with 131INa and EGF-131I (I) conjugates were sepd. Human cervical epidermoid carcinoma cell lines were exposed to I and cultured for 5 days. Cell exposed to I had significantly fewer viable cells as compared to those exposed to free 131I or unlabeled EGF.
ST EGF **radionuclide** conjugate neoplasm inhibitor; epidermal growth factor conjugate cancer; iodine EGF conjugate neoplasm inhibitor
IT Disulfides

RL: BIOL (Biological study)
(conjugates with epidermal growth factors and **radionuclides**, neoplasm inhibitors)

IT Sequestering agents
(conjugates with with epidermal growth factors and **radionuclides**, neoplasm inhibitors)

IT Neoplasm inhibitors
(epidermal growth factors conjugates with .alpha.-emitting **radionuclides** or non-**radioactive** iodine or oxyanion of metals or **radioactive** isotopes)

IT Gamma ray
(**radioactive** isotope emitting, conjugates with epidermal growth factors, neoplasm inhibitors)

IT **Radioelements**, compounds
RL: BIOL (Biological study)
(conjugates, with growth factors, for neoplasm inhibitors and neoplasm diagnosis)

IT Carboxylic acids, biological studies
RL: BIOL (Biological study)
(di-, conjugates with epidermal growth factors and **radionuclides**, neoplasm inhibitors)

IT Crown compounds
RL: BIOL (Biological study)
(ethers, conjugates with epidermal growth factors and **radionuclides**, neoplasm inhibitors)

IT Anions
(oxy-, of metals, conjugates with epidermal growth factors, neoplasm inhibitors)

IT Animal growth regulators
RL: BIOL (Biological study)
(.alpha.-transforming growth factors, conjugates with .alpha.-emitting **radionuclides** or non-**radioactive** iodine or oxyanion of metals or **radioactive** isotopes)

IT 124-09-4, 1,6-Hexanediamine, biological studies
RL: BIOL (Biological study)
(as linker, in growth factor conjugates as neoplasm inhibitors)

IT 62031-54-3, Fibroblast growth factor
RL: BIOL (Biological study)
(conjugates with .alpha.-emitting **radionuclides** or non-**radioactive** iodine or oxyanion of metals or **radioactive** isotopes)

IT 14133-76-7D, Technetium-99, conjugates with epidermal growth factors
RL: BIOL (Biological study)
(metastable, neoplasm inhibitor)

IT **7439-96-5D**, Manganese, conjugates with epidermal growth factors
7439-98-7D, Molybdenum, conjugates with epidermal growth factors
7440-15-5D, Rhenium, conjugates with epidermal growth factors
7440-26-8D, Technetium, conjugates with epidermal growth factors 7440-33-7D, Tungsten, conjugates with epidermal growth factors 7440-47-3D, Chromium, conjugates with epidermal growth factors 7440-62-2D, Vanadium, conjugates with epidermal growth factors 7553-56-2D, Iodine, conjugates with animal growth factors 10043-49-9D, Gold-198, conjugates with epidermal growth factors 10043-66-0D, Iodine-131, conjugates with epidermal growth factors 10098-91-6D, Yttrium-90, conjugates with epidermal growth factors 13233-32-4D, **Radium**-224, conjugates with epidermal growth factors 13494-80-9D, Tellurium, conjugates with epidermal growth factors 13981-25-4D, Copper-64, conjugates with epidermal growth factors 13981-27-6D, Zirconium-89, conjugates with epidermal growth factors 13981-51-6D, Mercury-197, conjugates with epidermal growth factors 13981-52-7D, Polonium-210, conjugates with epidermal growth factors **13981-56-1D**, Fluorine-18, conjugates with epidermal growth factors 13982-22-4D, Gallium-72, conjugates with epidermal growth factors 13982-78-0D, Mercury-203, conjugates with

epidermal growth factors 14093-04-0D, Iron-52, conjugates with epidermal growth factors 14119-08-5D, Gallium-66, conjugates with epidermal growth factors 14119-09-6D, Gallium-67, conjugates with epidermal growth factors 14158-30-6D, Iodine-124, conjugates with epidermal growth factors 14158-31-7D, Iodine-125, conjugates with epidermal growth factors 14265-71-5D, Selenium-75, conjugates with epidermal growth factors 14265-85-1D, Actinium-225, conjugates with epidermal growth factors 14378-26-8D, conjugates with epidermal growth factors 14391-11-8D, Gold-199, conjugates with epidermal growth factors 14392-02-0D, Chromium-51, conjugates with epidermal growth factors 14687-25-3D, Lead-203, conjugates with epidermal growth factors 14913-49-6D, Bismuth-212, conjugates with epidermal growth factors 14913-89-4D, conjugates with epidermal growth factors 14998-63-1D, Rhenium-186, conjugates with epidermal growth factors 15092-94-1D, Lead-212, conjugates with epidermal growth factors 15623-45-7D, **Radium**-223, conjugates with epidermal growth factors 15715-08-9D, Iodine-123, conjugates with epidermal growth factors 15735-86-1D, Polonium-206, conjugates with epidermal growth factors 15750-15-9D, Indium-111, conjugates with epidermal growth factors 15755-39-2D, Astatine-211, conjugates with epidermal growth factors 15756-57-7D, Polonium-213, conjugates with epidermal growth factors 15757-14-9D, Gallium-68, conjugates with epidermal growth factors 15757-86-5D, Copper-67, conjugates with epidermal growth factors 15758-35-7D, Ruthenium-97, conjugates with epidermal growth factors 15765-38-5D, Bromine-76, conjugates with epidermal growth factors 15765-39-6D, Bromine-77, conjugates with epidermal growth factors 15776-19-9D, Bismuth-206, conjugates with epidermal growth factors 15776-20-2D, conjugates with epidermal growth factors 62229-50-9D, Epidermal growth factor, conjugates with .alpha.-emitting **radionuclides**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neoplasm inhibitor)

IT 9061-61-4D, Nerve growth factor, conjugates with .alpha.-emitting **radionuclides** 17455-13-9D, 18-Crown-6-ether, conjugates with epidermal growth factors and **radionuclides** 33089-36-0D, 21-Crown-7-ether, conjugates with epidermal growth factors and **radionuclides** 67763-96-6D, Insulin like growth factor I, conjugates with .alpha.-emitting **radionuclides** 67763-97-7D, Insulin like growth factor II, conjugates with .alpha.-emitting **radionuclides**
RL: BIOL (Biological study)
(neoplasm inhibitors)

IT **7439-96-5D**, Manganese, conjugates with epidermal growth factors **13981-56-1D**, Fluorine-18, conjugates with epidermal growth factors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neoplasm inhibitor)

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1992:647833** HCAPLUS

DN **117:247833**
TI Localization of fluorine-18-labeled Mel-14 monoclonal **antibody** **F(ab)2** fragment in a subcutaneous xenograft model
AU Garg, Pradeep K.; Garg, Sudha; Bigner, Darell D.; Zalutsky, Michael R.
CS Med. Cent., Duke Univ., Durham, NC, 27710, USA
SO Cancer Research (**1992**), 52(18), 5054-60
CODEN: CNREA8; ISSN: 0008-5472
DT Journal
LA English
CC 8-9 (**Radiation** Biochemistry)
Section cross-reference(s): 14
AB Positron emission **tomog.** is an imaging method that might improve the effectiveness of **radioimmunoscintigraphy** and might provide more accurate ests. of monoclonal **antibody** dosimetry prior to therapy. Because of its widespread availability, 2-h half-life 18F could be a useful nuclide for labeling monoclonal **antibody** fragments, provided that adequate tumor uptake and satisfactory tumor-to-normal tissue ratios could be achieved rapidly. In this study, the tissue distribution of 18F-labeled Mel-14 **F(ab')2**, a monoclonal **antibody** reactive with gliomas, was evaluated in a s.c. athymic mouse human glioma xenograft model. 18F labeling was performed using N-succinimidyl-8-(4'-[18F]fluorobenzylamino)suberate. For paired-label comparisons both in vitro and in vivo, Mel-14 **F(ab')2** was also labeled using N-succinimidyl 3- [125I]iodobenzoate. When 100-120 .mu.g of disuccinimidyl substrate was used in the 18F-labeled acylation agent synthesis, the binding of 18F-labeled Mel-14 **F(ab')2** to glioma homogenates was comparable to that of the **radioiodinated** fragment. Scatchard analyses indicated nearly identical affinity consts. for fragments with both labels (18F, 6.4 .times. 108M-1; 125I, 6.7 .times. 108M-1). Tumor levels of 18F increased at 1-2 h and then were relatively const. at 2-6 h. When lower levels of disuccinimidyl substrate were used, there was an excellent correlation between 18F and 125I tumor uptake. At 4 h, tumor-to-normal tissue ratios for 18F-labeled Mel-14 **F(ab')2** in liver, spleen, muscle, and brain were 2.3, 4.2, 14, and 40, resp. Localization indexes, detd. by comparison with 118F-labeled nonspecific **F(ab')2**, were 3.7 at 4 h and 6.9 at 6 h for tumor and .apprx.1 for normal tissues, indicating the specificity of 18F-labeled Mel-14 **F(ab')2** tumor uptake.
ST positron emission **tomog** tumor fluorine 18; monoclonal **antibody** fragment positron emission **tomog**
IT Neoplasm
(positron emission **tomog.** of, with fluorine-18-labeled monoclonal **antibody F(ab')2** fragment)
IT Immunoglobulins
RL: BIOL (Biological study)
(G2a, monoclonal, fluorine-18-labeled **F(ab')2** fragment of, positron emission **tomog.** with, of tumor)
IT **Antibodies**
RL: BIOL (Biological study)
(monoclonal, fluorine-18-labeled **F(ab')2** fragment of, positron emission **tomog.** with, of tumor)
IT **Tomography**
(**positron-emission**, of tumor, with fluorine-18-labeled monoclonal **antibody F(ab')2** fragment)
IT 131865-55-9
RL: BIOL (Biological study)
(monoclonal **antibody F(ab')2** fragment labeling with, for positron emission **tomog.** of tumor)
IT **13981-56-1D**, Fluorine-18, monoclonal **antibody F(ab')2** fragment labeled with, biological studies
RL: BIOL (Biological study)

(positron emission **tomog.** with, of tumor)
IT **13981-56-1D**, Fluorine-18, monoclonal **antibody F** (**ab'**)2 fragment labeled with, biological studies
RL: BIOL (Biological study)
(positron emission **tomog.** with, of tumor)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1992:566797** HCAPLUS
DN **117:166797**
TI Fluorine-18-labeled monoclonal **antibody** fragments: a potential approach for combining **radioimmunoscintigraphy** and positron emission **tomography**
AU Vaidyanathan, Ganesan; Bigner, Darell D.; Zalutsky, Michael R.
CS Med. Cent., Duke Univ., Durham, NC, 27710, USA
SO Journal of Nuclear Medicine (**1992**), 33(8), 1535-41
CODEN: JNMEAQ; ISSN: 0161-5505
DT Journal
LA English
CC 8-9 (**Radiation** Biochemistry)
Section cross-reference(s): 14
AB Monoclonal **antibody** fragments labeled with 18F could be useful for **PET** if selective tumor uptake could be achieved within a few half-lives of this nuclide. To evaluate this possibility, the **F** (**ab'**)2 fragment of Mel-14, an **antibody** reactive with gliomas and other tumors, was labeled by reaction with N-succinimidyl -4-[18F]fluorobenzoate. The in-vitro binding properties of 18F-labeled Mel-14 **F**(**ab'**)2 were nearly identical to those obsd. when this **F**(**ab'**)2 was labeled by reaction with N-succinimidyl -4-[125I]iodobenzoate [18F, affinity const. = 6.7 .times. 108M-1; 125I, affinity const. = 8.8 .times. 108M-1]. The tissue distribution of the 2 labeled fragments was compared in paired-label studies performed in athymic mice with s.c. D-54 MG human glioma xenografts. Uptake of both nuclides in tumor was rapid, with levels as high as 18.7% injected dose/g for 18F and 19.4% injected dose/g for 225I obsd. by 4 h after injection. Tumor-to-normal tissue ratios for 18F-labeled Mel-14 **F**(**ab'**)2 at 4 h ranged from 0.8:1 for kidneys to 40:1 for brain. It may be feasible to use 18F-labeled **antibody** fragments for imaging tumors with **PET**.
ST fluorine 18 monoclonal **antibody** tumor; positron emission **tomog** tumor **antibody** fragment
IT Neoplasm, metabolism
(fluorine-18-labeled monoclonal **antibody F**(**ab'**)2 fragment metab. by, positron emission **tomog.** in relation to)
IT Dosimetry
(of fluorine-18-labeled monoclonal **antibody F**(**ab'**)2 fragment, in normal organs and tumor, positron emission **tomog.** in relation to)
IT **Antibodies**
RL: BIOL (Biological study)
(monoclonal, fluorine-18-labeled **F**(**ab'**)2 fragment of, metab. and biodistribution of, in tumor, positron emission **tomog.** in relation to)
IT **Tomography**
(**positron-emission**, of tumor, fluorine-18-labeled monoclonal **antibody F**(**ab'**)2 fragment

metab. and biodistribution studies in relation to)
IT 12585-85-2
RL: BIOL (Biological study)
(dosimetry, of fluorine-18-labeled monoclonal **antibody** **F(ab')2** fragment, in normal organs and tumor, positron emission **tomog.** in relation to)
IT **13981-56-1**, Fluorine-18, biological studies
RL: BIOL (Biological study)
(monoclonal **antibody** **F(ab')2** fragment labeled with, metab. and biodistribution of, in tumor, positron emission **tomog.** in relation to)
IT 141762-27-8
RL: BIOL (Biological study)
(monoclonal **antibody** **F(ab')2** fragment labeling with, for tumor positron emission **tomog.**)
IT **13981-56-1**, Fluorine-18, biological studies
RL: BIOL (Biological study)
(monoclonal **antibody** **F(ab')2** fragment labeled with, metab. and biodistribution of, in tumor, positron emission **tomog.** in relation to)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1991:674750** HCAPLUS
DN **115:274750**
TI **Antibody** fragments labeled with fluorine-18 and gallium-68: in vivo comparison with indium-111 and iodine-125-labeled fragments
AU Otsuka, Fyllis L.; Welch, Michael J.; Kilbourn, Michael R.; Dence, Carmen S.; Dilley, William G.; Wells, Samuel A., Jr.
CS Sch. Med., Washington Univ., St. Louis, MO, 63110, USA
SO Nuclear Medicine and Biology (**1991**), 18(7), 813-16
CODEN: NMBIEO; ISSN: 0883-2897
DT Journal
LA English
CC 8-9 (**Radiation** Biochemistry)
AB Although monoclonal **antibodies** have been **radiolabeled** with many different **radionuclides**, the application of positron emission **tomog.** (**PET**) to the imaging of **radiolabeled antibodies** has been limited to the investigation of a small no. of long-lived **radionuclides**. In this study, **F(ab')2** fragments of a mouse monoclonal **antibody** (BB5-G1) specific for a human parathyroid surface antigen were labeled with the positron emitting **radionuclides**, gallium-68 and fluorine-18. The biodistribution of the fragments was evaluated in a nude mice model and the results were compared to those obtained with fragments labeled with iodine-125 and indium-111 using conventional labeling techniques. All labeled fragments bound to human parathyroid tissue implanted in nude mice, with parathyroid-to-muscle ratios reaching as high as 10:1, 4 h after administration. A major difference was obsd. in the uptake and clearance of the various labeled fragments through the kidney. The halogen activity cleared, but the metal **radioactivity** was retained in the kidney. The results indicate that fluorine-18 or gallium-68 labeled fragment may be useful for parathyroid imaging with positron emission **tomog.**
ST fluorine 18 **antibody** fragment positron **tomog**; gallium 68 monoclonal **antibody** parathyroid
IT Parathyroid gland

(fluorine-18- and gallium-68-labeled monoclonal **antibody** fragments metab. by, positron emission **tomog.** in relation to)

IT **Antibodies**
RL: BIOL (Biological study)
(monoclonal, fluorine-18- and gallium-68-labeled **F(ab')2** fragments of, metab. and biodistribution of, positron emission **tomog.** of parathyroid gland in relation to)

IT **Tomography**
(**positron-emission**, of parathyroid gland, fluorine-18- and gallium-68-labeled monoclonal **antibody** fragments metab. and biodistribution in relation to)

IT **13981-56-1D**, Fluorine-18, monoclonal **antibody** fragments labeled with, biological studies 15757-14-9D, Gallium-68, monoclonal **antibody** fragments labeled with, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metab. and biodistribution of, positron emission **tomog.** of parathyroid gland in relation to)

IT **13981-56-1D**, Fluorine-18, monoclonal **antibody** fragments labeled with, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metab. and biodistribution of, positron emission **tomog.** of parathyroid gland in relation to)

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1991:400778** HCAPLUS
DN **115:778**
TI Covalently-linked complexes and methods for enhanced cytotoxicity and imaging
IN Anderson, David C.; Morgan, A. Charles; Abrams, Paul G.; Nichols, Everett J.; Fritzberg, Alan R.
PA NeoRx Corp., USA
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM A61K047-00
ICS A61K049-02; A61K043-00
CC 1-6 (Pharmacology)
Section cross-reference(s): **8**, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 359347	A2	19900321	EP 1989-250014	19890814	<--
	EP 359347	A3	19900418			
	EP 359347	B1	19921223			
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE					
	US 5135736	A	19920804	US 1988-232337	19880815	<--
	US 5169933	A	19921208	US 1989-390241	19890807	<--
	CA 1334513	A1	19950221	CA 1989-608198	19890811	<--
	JP 02124833	A2	19900514	JP 1989-209992	19890814	<--
	AT 83669	E	19930115	AT 1989-250014	19890814	<--
PRAI	US 1988-232337		19880815	<--		
	EP 1989-250014		19890814	<--		

AB Covalently-linked complexes (CLCs) for targeting a defined population of

cells comprise a targeting **protein** (e.g. **antibody**, hormone, enzyme, etc.), a cytotoxic agent (e.g. **radionuclide**, toxin, drug, etc.) an enhancing moiety capable of enhancing CLC-target cell interaction (e.g. a translocating/internalizing moiety, an anchoring **peptide**, membrane-sol. hydrophobic mol., etc.). The CLCs are used to enhance in vivo cytotoxicity and imaging (no data). Translocating **peptide**, Cys-Gly-Glu-Ala-Ala-Leu-Ala(Glu-Ala-Leu-Ala)4-Glu-Ala-Leu-Glu-Ala-Leu-Ala-Ala-NH2, is conjugated via succinimidyl 4(N-maleimidemethyl)cyclohexane-1-carboxylate (SMCC) to reduced toxin A chain. The conjugate is reacted with iminothiolane to generate further thiol groups which are then bonded to reduced **antibody** to **prep**. translocating **peptide**-ricin A chain-**antibody** CLC.

ST targeting **protein** cytotoxin enhancer conjugate; translocating **peptide** ricin **antibody** conjugate; imaging **radionuclide** targeting **protein** enhancer conjugate

IT Animal cell
(agents enhancing covalently-linked complex interaction with, conjugates with cytotoxic agent and targeting **protein**)

IT Clathrins
RL: BIOL (Biological study)
(**antibodies** to, conjugates with cytotoxic agent and targeting **protein**)

IT Antigens
RL: BIOL (Biological study)
(**antibody** to binding region of, conjugates with cytotoxic agent and target cell interaction enhancers)

IT Pokeweed
(antiviral **proteins** of, conjugates with targeting **protein** and target cell interaction enhancer)

IT **Antibodies**
RL: BIOL (Biological study)
(as targeting **protein** in conjugates with cytotoxic agent and target cell interaction enhancers)

IT Anesthetics
Animal growth regulators
RL: BIOL (Biological study)
(conjugates with cytotoxic agent and targeting **protein**)

IT Cytotoxic agents
Fluorescent substances
Pharmaceuticals
Toxins
RL: BIOL (Biological study)
(conjugates with targeting **protein** and target cell interaction enhancer)

IT Pseudomonas
(exotoxin A of, conjugates with targeting **protein** and target cell interaction enhancer)

IT Virus
(fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)

IT Membrane, biological
(mol. sol. in, conjugates with cytotoxic agent and targeting **protein**)

IT Venoms
(**peptides** of, of snake, conjugates with targeting **protein** and target cell interaction enhancer)

IT Barley
(toxins of, conjugates with targeting **protein** and target cell interaction enhancer)

IT Snake
(venom **peptides** of, conjugates with targeting **protein** and target cell interaction enhancer)

IT **Radioelements**, compounds
RL: BIOL (Biological study)
(Auger electron-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)
IT Virus, animal
(Sendai, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)
IT Toxins
RL: BIOL (Biological study)
(Shiga, conjugates with targeting **protein** and target cell interaction enhancer)
IT **Radioelements**, compounds
RL: BIOL (Biological study)
(X-ray-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)
IT **Radioelements**, compounds
RL: BIOL (Biological study)
(alpha-particle-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)
IT Fatty acids, compounds
RL: BIOL (Biological study)
(analogs, conjugates, with cytotoxic agent and targeting **protein**)
IT **Proteins**, specific or class
RL: BIOL (Biological study)
(antiviral, of pokeweed, conjugates with targeting **protein** and target cell interaction enhancer)
IT Lipoproteins
RL: BIOL (Biological study)
(apo-, A-I, conjugates, with cytotoxic agent and targeting **protein**)
IT Lipoproteins
RL: BIOL (Biological study)
(apo-, B, conjugates, with cytotoxic agent and targeting **protein**)
IT **Radioelements**, compounds
RL: BIOL (Biological study)
(beta-particle-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)
IT Avidins
Enzymes
Peptides, compounds
RL: BIOL (Biological study)
(conjugates, with cytotoxic agent and target cell interaction enhancers, for cell targeting for enhanced cytotoxicity)
IT Bile acids
Estrogens
Fatty acids, compounds
Phospholipids, compounds
Transferrins
RL: BIOL (Biological study)
(conjugates, with cytotoxic agent and targeting **protein**)
IT Leupeptins
Phosphatidylinositols
RL: BIOL (Biological study)
(conjugates, with cytotoxic agent and targeting **protein**, cell targeting with, for enhanced cytotoxicity and imaging)
IT Abrins
Radioelements, compounds
Ricins
RL: BIOL (Biological study)
(conjugates, with targeting **protein** and target cell interaction enhancer)

IT **Radiography**
Scintigraphy
Tomography
(contrast agents, covalently linked complexes contg. cytotoxic agent and targeting **protein** and enhancing moiety as)
IT Toxins
RL: BIOL (Biological study)
(cyto-, conjugates with targeting **protein** and target cell interaction enhancer)
IT Toxins
RL: BIOL (Biological study)
(diphtheria, conjugates with targeting **protein** and target cell interaction enhancer)
IT Toxins
RL: BIOL (Biological study)
(exo-, A, of Pseudomonas, conjugates with targeting **protein** and target cell interaction enhancer)
IT **Proteins**, specific or class
RL: BIOL (Biological study)
(fusion products, conjugates, with cytotoxic agent and targeting **protein**)
IT Carbohydrates and Sugars, compounds
RL: BIOL (Biological study)
(galactose-contg., conjugates, with cytotoxic agent and targeting **protein**)
IT **Radioelements**, compounds
RL: BIOL (Biological study)
(gamma-ray-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)
IT Ribonucleic acid formation factors
RL: BIOL (Biological study)
(gene tat, conjugates with cytotoxic agent and targeting **protein**)
IT Carbohydrates and Sugars, compounds
RL: BIOL (Biological study)
(glucose-contg., conjugates, with cytotoxic agent and targeting **protein**)
IT Virus, animal
(human immunodeficiency, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)
IT Virus, animal
(measles, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)
IT Glycerides, compounds
RL: BIOL (Biological study)
(medium-chain, conjugates, with cytotoxic agent and targeting **protein**)
IT **Antibodies**
RL: SPN (Synthetic preparation); PREP (Preparation)
(monoclonal, conjugates with chelated **radiolabel** and anchoring **peptide**, **prepn**. of, for cell targeting)
IT Virus, animal
(murine mammary tumor, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)
IT Toxins
RL: BIOL (Biological study)
(pertussis, conjugates with targeting **protein** and target cell interaction enhancer)
IT **Proteins**, specific or class
RL: BIOL (Biological study)
(pore-forming, conjugates, with cytotoxic agent and targeting **protein**)
IT **Radioelements**, compounds

RL: BIOL (Biological study)
(positron-emitting, conjugates, with targeting **protein** and target cell interaction enhancer)

IT Virus, animal
(respiratory syncytial, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)

IT **Proteins**, specific or class
RL: BIOL (Biological study)
(saporins, conjugates, with targeting **protein** and target cell interaction enhancer)

IT **Peptides**, compounds
RL: BIOL (Biological study)
(signal, conjugates, with cytotoxic agent and targeting **protein**)

IT Virus, animal
(simian immunodeficiency, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)

IT Virus, animal
(simian retro-, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)

IT Biological transport
(translocation, agents for, conjugates with cytotoxic agent and targeting **protein**)

IT **Proteins**, specific or class
RL: BIOL (Biological study)
(tritins, conjugates, with targeting **protein** and target cell interaction enhancer)

IT Virus, animal
(visna, fusion **peptide** anchoring sequences of, conjugates with cytotoxic agent and targeting **protein**)

IT Hemolysins
RL: BIOL (Biological study)
(.delta.-, conjugates, with cytotoxic agent and targeting **protein**)

IT Carbohydrates and Sugars, compounds
RL: BIOL (Biological study)
(N-acetylglucosamine-contg., conjugates, with cytotoxic agent and targeting **protein**)

IT 50-18-0D, Cyclophosphamide, conjugates with targeting **protein** and target cell interaction enhancer 51-21-8D, 5-Fluorouracil, conjugates with targeting **protein** and target cell interaction enhancer 54-42-2D, Iododeoxyuridine, conjugates with targeting **protein** and target cell interaction enhancer 56-81-5D, 1,2,3-Propanetriol, conjugates with cytotoxic agent and targeting **protein** 59-05-2D, Methotrexate, conjugates with targeting **protein** and target cell interaction enhancer 59-43-8D, Thiamine, conjugates with cytotoxic agent and targeting **protein** 66-72-8D, Pyridoxal, conjugates with cytotoxic agent and targeting **protein** 79-83-4D, Pantothenic acid, conjugates with cytotoxic agent and targeting **protein** 112-79-8D, Elaidic acid, conjugates with cytotoxic agent and targeting **protein** 123-39-7D, N-Methylformamide, conjugates with targeting **protein** and target cell interaction enhancer 128-13-2D, Ursodeoxycholic acid, conjugates with cytotoxic agent and targeting **protein** 133-89-1D, UDP-glucose, conjugates with cytotoxic agent and targeting **protein** 135-16-0D, conjugates with cytotoxic agent and targeting **protein** 137-58-6D, Lidocaine, conjugates with cytotoxic agent and targeting **protein** 145-63-1D, Suramin, conjugates with targeting **protein** and target cell interaction enhancer 147-94-4D, Cytarabine, conjugates with targeting **protein** and target cell interaction enhancer 148-82-3D, Melphalan, conjugates with targeting **protein** and target cell interaction enhancer 154-42-7D, 6-Thioguanine, conjugates with targeting **protein** and

target cell interaction enhancer 320-67-2D, Azacitidine, conjugates with targeting **protein** and target cell interaction enhancer 459-86-9D, Mitoguazone, conjugates with targeting **protein** and target cell interaction enhancer 474-25-9D, Chenodeoxycholic acid, conjugates with cytotoxic agent and targeting **protein** 512-64-1D, Echinomycin, conjugates with targeting **protein** and target cell interaction enhancer 528-04-1D, conjugates with cytotoxic agent and targeting **protein** 528-74-5D, Dichloromethotrexate, conjugates with targeting **protein** and target cell interaction enhancer 544-63-8D, Tetradecanoic acid, conjugates with cytotoxic agent and targeting **protein** 645-05-6D, Hexamethylmelamine, conjugates with targeting **protein** and target cell interaction enhancer 693-72-1D, trans-Vaccenic acid, conjugates with cytotoxic agent and targeting **protein** 865-21-4D, Vinblastine, conjugates with targeting **protein** and target cell interaction enhancer 2956-16-3D, UDP-galactose, conjugates with cytotoxic agent and targeting **protein** 3063-71-6D, conjugates with cytotoxic agent and targeting **protein** 3375-50-6D, conjugates with targeting **protein** and target cell interaction enhancer 3616-06-6D, UDP-xylose, conjugates with cytotoxic agent and targeting **protein** 3672-15-9D, Mannose-6-phosphate, conjugates with cytotoxic agent and targeting **protein** 3778-73-2D, Ifosfamide, conjugates with targeting **protein** and target cell interaction enhancer 4005-51-0D, 2-Amino-1,3,4-thiadiazole, conjugates with targeting **protein** and target cell interaction enhancer 6082-29-7D, conjugates with cytotoxic agent and targeting **protein** 6990-06-3D, Fusidic acid, conjugates with cytotoxic agent and targeting **protein** 7440-16-6D, Rhodium, conjugates with targeting **protein** and target cell interaction enhancer 7481-89-2D, Dideoxycytidine, conjugates with targeting **protein** and target cell interaction enhancer 9002-64-6D, Parathyroid hormone, conjugates with cytotoxic agent and targeting **protein** 9004-10-8D, Insulin, conjugates with cytotoxic agent and targeting **protein** 9007-12-9D, Calcitonin, conjugates with cytotoxic agent and targeting **protein** 9007-92-5D, Glucagon, conjugates with cytotoxic agent and targeting **protein** 9015-68-3D, Asparaginase, conjugates with targeting **protein** and target cell interaction enhancer 10043-49-9D, Gold-198, conjugates with targeting **protein** and target cell interaction enhancer 10043-66-0D, Iodine-131, conjugates with targeting **protein** and target cell interaction enhancer 10098-91-6D, Yttrium-90, conjugates with targeting **protein** and target cell interaction enhancer 10318-26-0D, Dibromodulcitol, conjugates with targeting **protein** and target cell interaction enhancer 11056-06-7D, Bleomycin, conjugates with targeting **protein** and target cell interaction enhancer 13494-90-1D, Gallium nitrate, conjugates with targeting **protein** and target cell interaction enhancer 13551-87-6D, Misonidazole, conjugates with targeting **protein** and target cell interaction enhancer 13909-02-9D, 1-(2-Chloroethyl)-3-(2,6-dioxo-3-piperidyl)-1-nitrosourea, conjugates with targeting **protein** and target cell interaction enhancer 13909-09-6D, Semustine, conjugates with targeting **protein** and target cell interaction enhancer 13981-22-1D, Nitrogen-13, conjugates with targeting **protein** and target cell interaction enhancer 13981-25-4D, Copper-64, conjugates with targeting **protein** and target cell interaction enhancer 13981-51-6D, Mercury-197, conjugates with targeting **protein** and target cell interaction enhancer **13981-56-1D**, Fluorine-18, conjugates with targeting **protein** and target cell interaction enhancer 13982-43-9D, Oxygen-15, conjugates with targeting **protein** and target cell interaction enhancer 14119-09-6D, Gallium-67, conjugates with targeting **protein** and target cell interaction enhancer 14158-31-7D, Iodine-125, conjugates with targeting **protein** and target cell interaction enhancer 14333-33-6D, Carbon-11, conjugates with

targeting **protein** and target cell interaction enhancer
14378-26-8D, Rhenium-188, conjugates with targeting **protein** and
target cell interaction enhancer 14378-53-1D, Rhodium-101, conjugates
with targeting **protein** and target cell interaction enhancer
14391-96-9D, Scandium-47, conjugates with targeting **protein** and
target cell interaction enhancer 14687-25-3D, Lead-203, conjugates with
targeting **protein** and target cell interaction enhancer
14769-73-4D, Levamisole, conjugates with targeting **protein** and
target cell interaction enhancer 14809-46-2D, Selenium-72, conjugates
with targeting **protein** and target cell interaction enhancer
14809-47-3D, Bromine-75, conjugates with targeting **protein** and
target cell interaction enhancer 14834-67-4, Iodine-133, biological
studies 14834-68-5D, Iodine-135, conjugates with targeting
protein and target cell interaction enhancer 14913-49-6D,
Bismuth-212, conjugates with targeting **protein** and target cell
interaction enhancer 14914-02-4D, conjugates with targeting
protein and target cell interaction enhancer 14914-68-2D,
conjugates with targeting **protein** and target cell interaction
enhancer 14981-64-7D, Palladium-109, conjugates with targeting
protein and target cell interaction enhancer 14998-63-1D,
Rhenium-186, conjugates with targeting **protein** and target cell
interaction enhancer 15092-94-1D, Lead-212, conjugates with targeting
protein and target cell interaction enhancer 15411-62-8D,
Ruthenium-99, conjugates with targeting **protein** and target cell
interaction enhancer 15663-27-1D, cis-Platinum, conjugates with
targeting **protein** and target cell interaction enhancer
15690-69-4D, Palladium-100, conjugates with targeting **protein**
and target cell interaction enhancer 15715-08-9D, conjugates with
targeting **protein** and target cell interaction enhancer
15741-25-0D, Barium-128, conjugates with targeting **protein** and
target cell interaction enhancer 15750-15-9D, Indium-111, conjugates
with targeting **protein** and target cell interaction enhancer
15755-33-6D, Arsenic-72, conjugates with targeting **protein** and
target cell interaction enhancer 15755-39-2D, Astatine-211, conjugates
with targeting **protein** and target cell interaction enhancer
15757-14-9D, Gallium-68, conjugates with targeting **protein** and
target cell interaction enhancer 15757-86-5D, Copper-67, conjugates with
targeting **protein** and target cell interaction enhancer
15765-38-5D, Bromine-76, conjugates with targeting **protein** and
target cell interaction enhancer 15765-39-6D, Bromine-77, conjugates
with targeting **protein** and target cell interaction enhancer
15839-70-0D, GDP-fucose, conjugates with cytotoxic agent and targeting
protein 16468-59-0D, conjugates with targeting **protein**
and target cell interaction enhancer 17479-04-8D, UDP-glucosamine,
conjugates with cytotoxic agent and targeting **protein**
20449-79-0D, Melittin, conjugates with cytotoxic agent and targeting
protein 20537-88-6D, Ethiofos, conjugates with targeting
protein and target cell interaction enhancer 22668-01-5D,
conjugates with targeting **protein** and target cell interaction
enhancer 23205-42-7D, 3-Deazauridine, conjugates with targeting
protein and target cell interaction enhancer 23214-92-8D,
Doxorubicin, conjugates with targeting **protein** and target cell
interaction enhancer 23491-44-3D, Pibenzimol, conjugates with targeting
protein and target cell interaction enhancer 24584-09-6D,
ICRF-187, conjugates with targeting **protein** and target cell
interaction enhancer 26833-87-4D, Homoharringtonine, conjugates with
targeting **protein** and target cell interaction enhancer
27061-78-5D, Alamethicin, conjugates with cytotoxic agent and targeting
protein 29767-20-2D, Teniposide, conjugates with targeting
protein and target cell interaction enhancer 31312-81-9D,
Yttrium-80, conjugates with targeting **protein** and target cell
interaction enhancer 31362-50-2D, Bombesin, conjugates with cytotoxic
agent and targeting **protein** 31441-78-8D, Mercaptopurine,

conjugates with targeting **protein** and target cell interaction enhancer 32954-58-8D, Ipomeanol, conjugates with targeting **protein** and target cell interaction enhancer 33069-62-4D, Taxol, conjugates with targeting **protein** and target cell interaction enhancer 41575-94-4D, Carboplatin, conjugates with targeting **protein** and target cell interaction enhancer 41992-23-8D, Spirogermanium, conjugates with targeting **protein** and target cell interaction enhancer 42228-92-2D, conjugates with targeting **protein** and target cell interaction enhancer 51264-14-3D, Amsacrine, conjugates with targeting **protein** and target cell interaction enhancer 51321-79-0D, PALA, conjugates with targeting **protein** and target cell interaction enhancer 51348-50-6D, .alpha.-L-Fucose, conjugates with cytotoxic agent and targeting **protein** 51724-48-2D, Trichothec-9-ene, conjugates with targeting **protein** and target cell interaction enhancer 52128-35-5D, Trimetrexate, conjugates with targeting **protein** and target cell interaction enhancer 53910-25-1D, Pentostatin, conjugates with targeting **protein** and target cell interaction enhancer 54749-90-5D, Chlorozotocin, conjugates with targeting **protein** and target cell interaction enhancer 56605-16-4D, conjugates with targeting **protein** and target cell interaction enhancer 57576-44-0D, Aclarubicin, conjugates with targeting **protein** and target cell interaction enhancer 57998-68-2D, Aziridinyl benzoquinone, conjugates with targeting **protein** and target cell interaction enhancer 59587-18-7D, conjugates with cytotoxic agent and targeting **protein** 59587-24-5D, conjugates with cytotoxic agent and targeting **protein** 59653-73-5D, Teroxirone, conjugates with targeting **protein** and target cell interaction enhancer 59763-91-6D, Pancreatic **polypeptide**, conjugates with cytotoxic agent and targeting **protein** 60084-10-8D, Tiazofurin, conjugates with targeting **protein** and target cell interaction enhancer 60617-12-1D, .beta.-Endorphin, conjugates with cytotoxic agent and targeting **protein** 61966-08-3D, Triciribine phosphate, conjugates with targeting **protein** and target cell interaction enhancer 62488-57-7D, conjugates with targeting **protein** and target cell interaction enhancer 62928-11-4D, Iproplatin, conjugates with targeting **protein** and target cell interaction enhancer 63521-85-7D, 4'-Deoxydoxorubicin, conjugates with targeting **protein** and target cell interaction enhancer 65271-80-9D, Mitoxantrone, conjugates with targeting **protein** and target cell interaction enhancer 65886-71-7D, Fazarabine, conjugates with targeting **protein** and target cell interaction enhancer 69111-41-7D, conjugates with cytotoxic agent and targeting **protein** 69408-81-7D, conjugates with targeting **protein** and target cell interaction enhancer 70699-67-1D, Paradoxin, derivs., conjugates with cytotoxic agent and targeting **protein** 71628-96-1D, Menogaril, conjugates with targeting **protein** and target cell interaction enhancer 73027-21-1D, derivs., conjugates with cytotoxic agent and targeting **protein** 75607-67-9D, Fludarabine phosphate, conjugates with targeting **protein** and target cell interaction enhancer 77327-05-0D, Didemnin B, conjugates with targeting **protein** and target cell interaction enhancer 79152-85-5D, conjugates with targeting **protein** and target cell interaction enhancer 81424-67-1D, Caracemide, conjugates with targeting **protein** and target cell interaction enhancer 87626-55-9D, Flavone-8-acetic acid, conjugates with targeting **protein** and target cell interaction enhancer 89149-10-0D, Deoxyspergualin, conjugates with targeting **protein** and target cell interaction enhancer 91441-23-5D, conjugates with targeting **protein** and target cell interaction enhancer 96249-43-3D, conjugates with cytotoxic agent and targeting **protein** 97534-21-9D, Merbarone, conjugates with targeting **protein** and target cell interaction enhancer 99278-10-1D, conjugates with cytotoxic agent and targeting **protein** 103233-04-1D, conjugates with

cytotoxic agent and targeting **protein** 108026-95-5D, conjugates with cytotoxic agent and targeting **protein** 110064-88-5D, conjugates with cytotoxic agent and targeting **protein** 131256-61-6D, conjugates with cytotoxic agent and targeting **protein** 131256-82-1D, conjugates with cytotoxic agent and targeting **protein** 131256-85-4D, conjugates with cytotoxic agent and targeting **protein** 131257-09-5D, Bombolittin, conjugates with cytotoxic agent and targeting **protein** 131399-93-4D, derivs., conjugates with cytotoxic agent and targeting **protein** 131399-94-5D, conjugates with cytotoxic agent and targeting **protein** 131399-95-6D, conjugates with cytotoxic agent and targeting **protein** 131399-96-7D, conjugates with cytotoxic agent and targeting **protein** 131399-97-8D, conjugates with cytotoxic agent and targeting **protein** 131399-98-9D, conjugates with cytotoxic agent and targeting **protein** 131399-99-0D, conjugates with cytotoxic agent and targeting **protein** 131400-00-5D, conjugates with cytotoxic agent and targeting **protein** 131400-01-6D, conjugates with cytotoxic agent and targeting **protein** 131400-02-7D, conjugates with cytotoxic agent and targeting **protein** 131400-03-8D, conjugates with cytotoxic agent and targeting **protein** 131400-04-9D, conjugates with cytotoxic agent and targeting **protein** 131400-05-0D, conjugates with cytotoxic agent and targeting **protein** 131400-06-1D
, conjugates with cytotoxic agent and targeting **protein** 131400-07-2D, conjugates with cytotoxic agent and targeting **protein** 131400-08-3D, conjugates with cytotoxic agent and targeting **protein**
RL: BIOL (Biological study)
(cell targeting with, for enhanced cytotoxicity and imaging)

IT 58-85-5D, Biotin, conjugates with cytotoxic agent and target cell interaction enhancers
RL: BIOL (Biological study)
(for cell targeting for enhanced cytotoxicity and imaging)

IT 14133-76-7D, Technetium-99, conjugates with targeting **protein** and target cell interaction enhancer
RL: BIOL (Biological study)
(metastable, cell targeting with, for enhanced cytotoxicity and imaging)

IT 96573-46-5 99616-33-8 99896-85-2 110590-64-2
RL: BIOL (Biological study)
(**peptides** contg., conjugates with cytotoxic agent and targeting **protein**)

IT 14378-26-8DP, complexes with GABA deriv., conjugates with monoclonal **antibody** and anchoring **peptide** 131418-21-8DP, rhenium-188 complexes, conjugates with monoclonal **antibody** and anchoring **peptide**
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, as **radionuclide**-targeting **protein**-anchoring **peptide** covalently-linked complex for cell targeting)

IT 131400-09-4DP, conjugates with ricin A chain and **antibody**
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, as translocating **peptide**-targeting **protein**-cytotoxic agent covalently-linked complex for cell targeting)

IT 544-63-8DP, Tetradecanoic acid, esters
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, for conjugation with **antibody** fragment and cytotoxic agent)

IT 41191-04-2
RL: BIOL (Biological study)
(sol., cell targeting with, for enhanced cytotoxicity and imaging)

IT 65988-88-7D, Modeccin, conjugates 75037-46-6D, Gelonin, conjugates
RL: BIOL (Biological study)
(with targeting **protein** and target cell interaction enhancer)
IT **13981-56-1D**, Fluorine-18, conjugates with targeting **protein** and target cell interaction enhancer
RL: BIOL (Biological study)
(cell targeting with, for enhanced cytotoxicity and imaging)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

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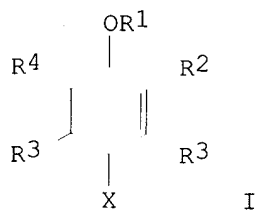
L159 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1990:587359** HCAPLUS
DN **113:187359**
TI **Radiohalogenated** compounds, their conjugation to **antibodies**, and their use in therapy and imaging
IN Coughlin, Daniel J.; Belinka, Benjamin A.; Alvarez, Vernon L.
PA Cytogen Corp., USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K049-02
ICS A61K039-395; C07C109-10
CC 8-9 (**Radiation** Biochemistry)
Section cross-reference(s): 25, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8911876	A1	19891214	WO 1989-US2467	19890606 <--
	W: AU, JP				
	US 4966999	A	19901030	US 1988-203793	19880607 <--
	CA 1318615	A1	19930601	CA 1989-601795	19890605 <--
	EP 348261	A1	19891227	EP 1989-401557	19890606 <--
	EP 348261	B1	19931215		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AU 8937728	A1	19900105	AU 1989-37728	19890606 <--
	JP 02504643	T2	19901227	JP 1989-506891	19890606 <--
	AT 98630	E	19940115	AT 1989-401557	19890606 <--
	ES 2062061	T3	19941216	ES 1989-401557	19890606 <--
PRAI	US 1988-203793		19880607 <--		
	EP 1989-401557		19890606 <--		
	WO 1989-US2467		19890606 <--		

OS MARPAT 113:187359
GI



I

AB **Radiohalogenated** compds. I (R1 = H, alkyl, hydroxylalkyl; R2 =

acid hydrazide, alkyl acid hydrazide, hydrazino, alkylhydrazine, alkylphenylhydrazine, alkylamine, alkoxyamine; R3 = H, alkyl, R2; R4 = alkyl, hydroxyalkyl, R2; X = **radioactive** I, Br, F, or At) are attached via a covalent bond between an amine of I and an oxidized carbohydrate of an **antibody** or **antibody** fragment for treatment of a cellular disorder or for in vivo imaging. CYT-0303 [I; R1, R3 = H, R2 = C(O)NHNH2, X = 125I, R4 = Me], **prepd.** by **radioiodinating** the active arom. ester Me 2-hydroxy-3-methylbenzoate and hydrazinolyzing the intermediate, was site-specifically attached to NaIO4-oxidized monoclonal **antibody** B72.3 (to human breast and colon cancer). Control of the extent of redn. of the covalent bond formed between the amine group of the CYT-0303 and the oxidized carbohydrate moiety permitted control of the biol. half-life of the conjugate when administered in vivo. The conjugate was delivered to target tumor tissue as well as or better than conventionally **radioiodinated** conjugates and was not delivered to nontarget sites such as spleen and liver. Moreover, in contrast to directly **radioiodinated antibody** which is significantly dehalogenated, the conjugate with CYT-0303 was not significantly dehalogenated when administered in vivo.

ST **radiohalogenated** benzene deriv **antibody** conjugate; cell disorder **radiohalogenated** compd **antibody** conjugate; imaging **radiohalogenated** compd **antibody** conjugate; tumor targeting **radiohalogenated** compd **antibody** conjugate

IT Scintigraphy
(**antibody-radiohalogenated** compd. conjugates for)

IT **Antibodies**
RL: BIOL (Biological study)
(conjugates with **radiohalogenated** compds., for imaging and therapy)

IT Animal tissue
(imaging of, **antibody-radiohalogenated** compd. conjugates for)

IT Intestine, neoplasm
(colon, monoclonal **antibody** B72.3 to, conjugates with **radiohalogenated** compds., biodistribution of)

IT Intestine, neoplasm
(colon, adenocarcinoma, **radiohalogenated** compd.-monoclonal **antibody** B72.3 conjugates targeting of)

IT Animal cell
(disease, treatment of, with **antibody-radiohalogenated** compd. conjugates)

IT **Antibodies**
RL: BIOL (Biological study)
(monoclonal, conjugates with **radiohalogenated** compds., for imaging and therapy)

IT Mammary gland
(neoplasm, monoclonal **antibody** B72.3 to, conjugates with **radiohalogenated** compds., biodistribution of)

IT 7440-68-8D, Astatine, isotopes, benzene deriv. reaction products
7553-56-2D, Iodine, isotopes, benzene deriv. reaction products
7726-95-6D, Bromine, isotopes, benzene deriv. reaction products
7782-41-4D, Fluorine, isotopes, benzene deriv. reaction products
10043-66-0D, Iodine-131, benzene deriv. reaction products
13981-56-1D, Fluorine-18, benzene deriv. reaction products
14158-31-7D, Iodine-125, benzene deriv. reaction products 14809-47-3D, Bromine-75, benzene deriv. reaction products 15715-08-9D, Iodine-123, benzene deriv. reaction products 15755-39-2D, Astatine-211, benzene deriv. reaction products 15765-38-5D, Bromine-76, benzene deriv. reaction products 15765-39-6D, Bromine-77, benzene deriv. reaction products
RL: BIOL (Biological study)

(**antibodies radiohalogenation** with, for imaging and therapy)
IT 83-40-9
RL: BIOL (Biological study)
(hydroxysuccinimidation of, in **antibody** conjugate **prepn.**)
IT 126513-96-0DP, **antibody** conjugates 130226-53-8DP, **antibody** conjugates 130226-55-0DP, **antibody** conjugates
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(**prepn.** and biodistribution of)
IT 130226-54-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and **radioiodination** of, in **antibody** conjugate **prepn.**)
IT 658-79-7 23287-26-5, Methyl 2-hydroxy-3-methylbenzoate
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radioiodination** of, in **antibody** conjugate **prepn.**)
IT 130226-48-1 130226-49-2 130226-50-5 130226-51-6 130226-52-7
RL: BIOL (Biological study)
(**radioiodine**-contg., **antibodies radiohalogenation** with, for imaging and treatment)
IT **13981-56-1D**, Fluorine-18, benzene deriv. reaction products
RL: BIOL (Biological study)
(**antibodies radiohalogenation** with, for imaging and therapy)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

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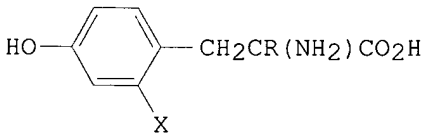
L159 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1990:56691** HCAPLUS
DN **112:56691**
TI **Preparation** of **radiohalotyrosines** for use as tracers in **tomography**
IN Coenen, Heinz Hubert; Kling, Peer; Stoecklin, Gerhard
PA Kernforschungsanlage Juelich G.m.b.H., Fed. Rep. Ger.
SO Ger. Offen., 4 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM A61K049-02
ICS C07C101-72; G01N023-00
CC 34-2 (**Amino Acids, Peptides**, and **Proteins**)
Section cross-reference(s): **8**, 13, **74**
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3800302	A1	19890727	DE 1988-3800302	19880108 <--
	DE 3800302	C2	19910110		
	US 4925651	A	19900515	US 1988-280804	19881207 <--
PRAI	DE 1988-3800302		19880108 <--		

OS CASREACT 112:56691; MARPAT 112:56691
GI



I

AB The title compds. (I; X = 18F, 75Br, 125iodine; R = H, Me), useful as tracers for study of **protein** synthesis via positron emission **tomog**. or single photon emission **tomog**., were **prepd**. Thus, L-O-acetyltyrosine in CF3CO2H at 0.degree. was treated with 18F (0.2% in Ne). The product was deacetylated with NaOH/H2O to give L-2-18F-tyrosine (II) with specific activity of .apprx.50 C-B q/mmol in 17% **radiochem**. yield. At 0.75-1.5 MBg i.v. in mice, II was .apprx.84% incorporated in cerebral tissue after 1 h.

ST **radiofluorotyrosine prepn tomog** tracer; positron emission **tomog** tracer **radiohalotyrosine**; **PET** tracer **radiohalotyrosine**; SPECT tracer **radiohalotyrosine**; single photon emission **tomog** **radiohalotyrosine**; tyrosine **radiohalo prepn** **tomog** tracer

IT **Proteins**, biological studies
RL: SPN (Synthetic preparation); PREP (Preparation)
(biosynthesis, **prepn**. of **radiohalotyrosines** for use in emission **tomog**. study of)

IT **Tomography**
(**positron-emission**, tracers for, bromine-75- and fluorine-18-labeled tyrosine as)

IT **Tomography**
(single-photon-emission, tracer for, iodine-123-labeled tyrosine as)

IT **13981-56-1**, Fluorine-18, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination by, of acetyltyrosine)

IT 6636-22-2, L-O-Acetyltyrosine
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of)

IT 124705-12-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn**. and deacetylation of)

IT 119401-75-1P 124705-13-1P 124705-15-3P 124705-16-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn**. of, as tracer for positron-emission **tomog**.)

IT 124705-14-2P 124705-17-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn**. of, as tracer for single-photon-emission **tomog**.)

IT **13981-56-1**, Fluorine-18, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination by, of acetyltyrosine)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1989:582621** HCAPLUS

DN **111:182621**

TI **Radioactivity** aspects of fusion reactors
AU Cheng, E. T.
CS Gen. At., San Diego, CA, 92138-5608, USA
SO Fusion Engineering and Design (**1989**), Volume Date 1988, 10, 231-42
CODEN: FEDEEE; ISSN: 0920-3796
DT Journal
LA English
CC 71-2 (Nuclear Technology)
AB Activation characteristics, including **radioactivity**, decay heating rate, and integrated decay energy at times after shutdown of a D-T fusion power reactor were investigated for all potential reactor materials using a recently published comprehensive activation cross-section libray and decay data handbook. Among the potential structural elements, the shutdown activity could vary by orders of magnitude, with C, O, and Si producing the least **radioactivity** and Mo giving the highest activity within a few days after shutdown, a period of importance to the reactor operator. V, Ti, and Fe are among the lower activation elements with the activity levels higher than Si by about 1 (for V) to 2 (for Ti and Fe) orders of magnitude. As far as alloying elements are concerned, Cr and Si are best for minimizing the activity level; Mn, Ni, Ta and W are among the elements giving higher **radioactivity** and decay heat values. These higher activity elements are furthermore subject to the n spectral effect resulting in an increase of activation levels in a soft spectrum with higher neutron population at lower energies. The important elements, that need to be limited in fusion reactor materials in order to meet the 10CFR61 Class C shallow-land burial disposal goal, are Al, Si, Ni, Zr and Ta as alloying elements, and Nb, Mo, Ag, Gd, Tb, and Ho as impurities. The concn. limits of some of these elements such as Nb will also become more restrictive in a soft n spectrum, which is typical for the present fusion expt. facilities under investigation.
ST fusion reactor shutdown **radioactivity**; activation fusion reactor material; neutron activation fusion reactor material; **radioactive** waste activation fusion reactor
IT Nuclear fusion reactors
(activation of materials in, waste disposal in relation to)
IT **Radioactive** wastes
(disposal of, **radioactivity** aspects of fusion reactors in relation to)
IT 7440-03-1P, Niobium-93, **preparation** 13966-26-2P, Lead-204, **preparation** 13982-37-1P, Niobium-92, **preparation** 14093-09-5P, Hafnium-177, **preparation** 14133-76-7P, Technetium-99, **preparation** 14265-76-0P, Hafnium-179, **preparation** 14265-77-1P, Hafnium-178, **preparation** 14265-78-2P, Hafnium-180, **preparation** 14331-79-4P, Bismuth-210, **preparation** 15720-57-7P, Thallium-202, **preparation**
RL: PREP (Preparation)
(formation of metastable, as activation product in deuterium-tritium fusion reactor)
IT 15750-13-7P, Hafnium-175, **preparation**
RL: PREP (Preparation)
(formation of stable and metastable, as activation product in deuterium-tritium fusion reactor)
IT 10028-17-8P, Hydrogen-3, **preparation** 10098-91-6P, **preparation** 10098-97-2P, Strontium-90, **preparation** 10198-40-0P, Cobalt-60, **preparation** 13966-05-7P, Calcium-45, **preparation** 13966-31-9P, Manganese-54, **preparation** 13966-32-0P, Sodium-22, **preparation** 13967-63-0P, Scandium-46, **preparation** 13967-76-5P, Niobium-95, **preparation** 13968-51-9P, Thallium-204, **preparation** 13981-25-4P, Copper-64, **preparation** 13981-27-6P, Zirconium-89, **preparation** 13981-37-8P, Nickel-63, **preparation** 13981-38-9P, Cobalt-58,

preparation 13981-50-5P, Cobalt-57, **preparation** 13981-51-6P, Mercury-197, **preparation** **13981-56-1P**, Fluorine-18, **preparation** 13982-00-8P, Tantalum-182, **preparation** 13982-04-2P, Sodium-24, **preparation** 13982-36-0P, **preparation** 13982-39-3P, Zinc-65, **preparation** 13982-78-0P, Mercury-203, **preparation** 13994-71-3P, Argon-37, **preparation** 14092-95-6P, Calcium-41, **preparation** 14119-13-2P, Molybdenum-93, **preparation** 14119-28-9P, Lead-205, **preparation** 14145-42-7P, Bismuth-208, **preparation** 14191-87-8P, Mercury-199, **preparation** 14320-93-5P, Gold-195, **preparation** 14336-70-0P, Nickel-59, **preparation** 14378-26-8P, Rhenium-188, **preparation** 14390-89-7P, Beryllium-10, **preparation** 14391-27-6P, Tantalum-179, **preparation** 14391-86-7P, Scandium-48, **preparation** 14391-96-9P, Scandium-47, **preparation** 14392-01-9P, Vanadium-49, **preparation** 14392-02-0P, Chromium-51, **preparation** 14452-47-2P, Lutetium-176, **preparation** 14596-12-4P, Iron-59, **preparation** 14681-52-8P, Manganese-56, **preparation** 14681-59-5P, Iron-55, **preparation** 14681-63-1P, Niobium-94, **preparation** 14682-66-7P, Aluminum-26, **preparation** 14682-97-4P, Niobium-91, **preparation** 14687-25-3P, Lead-203, **preparation** 14762-75-5P, Carbon-14, **preparation** 14833-26-2P, Zinc-63, **preparation** 14914-16-0P, Gold-196, **preparation** 14932-41-3P, Tungsten-185, **preparation** 14983-46-1P, Rhenium-184, **preparation** 14998-63-1P, Rhenium-186, **preparation** 14999-33-8P, Manganese-53, **preparation** 15749-46-9P, Tungsten-181, **preparation** 15751-77-6P, Zirconium-93, **preparation** 15758-35-7P, Ruthenium-97, **preparation** 15759-35-0P, Technetium-97, **preparation** 25729-41-3P, Argon-39, **preparation** 32025-58-4P, Technetium-98, **preparation**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, as activation product in deuterium-tritium fusion reactor)

IT 7429-90-5, Aluminum, reactions **7439-89-6**, Iron, reactions 7439-95-4, Magnesium, reactions **7439-96-5**, Manganese, reactions 7440-02-0, Nickel, reactions 7440-21-3, Silicon, reactions 7440-23-5, Sodium, reactions 7440-32-6, Titanium, reactions 7440-41-7, Beryllium, reactions 7440-42-8, Boron, reactions 7440-44-0, Carbon, reactions 7440-47-3, Chromium, reactions 7440-48-4, Cobalt, reactions 7440-50-8, Copper, reactions 7440-62-2, Vanadium, reactions 7440-66-6, Zinc, reactions 7440-67-7, Zirconium, reactions 7440-70-2, Calcium, reactions 7727-37-9, Nitrogen, reactions 7782-41-4, Fluorine, reactions 7782-44-7, Oxygen, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutron activation of, in deuterium-tritium fusion reactor)

IT 7439-92-1, Lead, reactions 7439-97-6, Mercury, reactions 7439-98-7, Molybdenum, reactions 7440-03-1, Niobium, reactions 7440-15-5, Rhenium, reactions 7440-25-7, Tantalum, reactions 7440-33-7, Tungsten, reactions 7440-58-6, Hafnium, reactions 7440-69-9, Bismuth, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutron activation reaction of, in deuterium-tritium fusion reactor)

IT 12586-31-1, Neutron, chemical and physical effects
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(reactivity aspects of fusion reactor materials in relation to)

IT 7782-39-0, Deuterium, uses and miscellaneous 10028-17-8, Tritium, uses and miscellaneous
RL: USES (Uses)
(reactivity aspects of fusion reactors in relation to)

IT **13981-56-1P**, Fluorine-18, **preparation**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, as activation product in deuterium-tritium fusion

reactor)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

IT **7439-89-6**, Iron, reactions **7439-96-5**, Manganese, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(neutron activation of, in deuterium-tritium fusion reactor)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

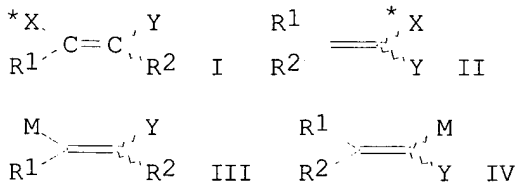
RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

L159 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1989:550041** HCAPLUS
DN **111:150041**
TI Vinyl substituted **radiohalogen** conjugates for **protein** labeling
IN Wilbur, Daniel Scott; Hadley, Stephen W.
PA NeoRx Corp., USA
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07B059-00
ICS C07F007-22; A61K043-00; A61K049-02
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 25, 29
FAN.CNT 1

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	EP 289187	A2	19881102		EP 1988-303474	19880418	<--
	EP 289187	A3	19900328				
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE						
	US 4870188	A	19890926		US 1987-39155	19870416	<--
	US 4876081	A	19891024		US 1988-171731	19880405	<--
	DK 8802088	A	19881017		DK 1988-2088	19880415	<--
	NO 8801635	A	19881017		NO 1988-1635	19880415	<--
	AU 8814658	A1	19881020		AU 1988-14658	19880415	<--
	AU 606936	B2	19910221				
	CA 1338770	A1	19961203		CA 1988-564230	19880415	<--
	CN 1030748	A	19890201		CN 1988-102358	19880416	<--
	JP 01034930	A2	19890206		JP 1988-94405	19880416	<--
	US 5200169	A	19930406		US 1989-350104	19890705	<--
PRAI	US 1987-39155		19870416	<--			
	US 1988-171731		19880405	<--			

OS MARPAT 111:150041
GI



AB Vinyl **radiohalogenated** small mols. I and II [*X = **radiohalogen**; R1,R2 = H, (substituted)alkyl, (substituted)aryl, heteroalkyl, heteroaryl, mixed alkyl aryl; Y = R1,R2, except not H, and bears a functionalgroup suitable for binding to **proteins** under conditions preserving biol. activity] and organometallic intermediates III and IV [M = trialkylstannane, Sn(n-Bu)3, SnMe3, SiX4, X2, HgX (X = Cl, Br, I), Hg acetate, B(OH)2, BQ2 (Q = hydride, alkyl, alkoxy, with .ltoreq.5 C), Zr(Cp)2Cl (Cp = cyclopentadienyl), SiF5K2; R1,R2, Y same as above] are described. I and II can be coupled to **proteins** such as monoclonal **antibodies** to provide reagents for diagnosis and therapy. To a soln. of tri-n-butylstannyl 5-(tri-n-butylstannyl)-4-pentenoate (1.0 equiv) (**prepn.** presented) in anhyd. THF was added dicyclohexylcarbodiimide (1.2 equiv) and 2,3,5,6-tetrafluorophenyl (1.2 equiv). This soln. was stirred overnight, filtered, the filtrate was concd. and the residue chromatographed to yield 2,3,5,6-tetrafluorophenyl 5-(tri-n-butyltannyl)-4-pentoate (V). I (25 .mu.g) in 25 .mu.L 5% HOAc/MeOH was mixed with N-chlorosuccinimide (10 .mu.g in 10 .mu.L MeOH) and 10 .mu.L phosphate buffered saline. To this soln. was added Na 125I soln. (in 0.1 N NaOH, 100 .mu.Ci-2 mCi), and after 5 min at room temp., 10 .mu.L Na2S2O5 (0.72 mg/mL) was added, yielding 2,3,5,6-tetrafluorophenyl 5-[125I]-iodo-4-pentenoate (VI) at >80%. VI was mixed with buffered **protein** soln. (pH 8.5-9.5) for 30-60 min at 37.degree.; and then **protein** conjugates were sepd. by gel permeation chromatog. Yield of conjugated product was .apprx.35%.

ST **radiohalogen protein** conjugation biol activity; ethylene deriv **radiohalogenation protein**

IT Neoplasm
(cells of, monoclonal **antibodies** to, **radiohalogenation** of, ethylene derivs. in, biol. activity in relation to)

IT Melanoma
(monoclonal **antibody** to, **Fab** fragment of, conjugates with **radioiodinated** tetrafluorophenyl pentenoate, **prepn.** of, for biodistribution studies)

IT **Proteins**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radiohalogenation** of, ethylene derivs. in, biol. activity in relation to)

IT **Antibodies**
RL: RCT (Reactant); RACT (Reactant or reagent)
(monoclonal, **radiohalogenation** of, ethylene derivs. in, biol. activity in relation to)

IT 74-85-1D, Ethene, derivs. 74-85-1D, Ethene, organometallic esters
RL: ANST (Analytical study)
(in **protein radiohalogenation**, biol. activity in relation to)

IT 10043-66-0, Iodine-131, reactions **13981-56-1**, Fluorine-18, reactions 14158-31-7, Iodine-125, reactions 14809-47-3, Bromine-75, reactions 15715-08-9, Iodine-123, reactions 15755-39-2, Astatine-211, reactions 15765-38-5, Bromine-76, reactions 15765-39-6, Bromine-77, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(monoclonal **antibody** and other **protein** labeling with, ethylene derivs. in, biol. activity in relation to)
IT 123018-16-6DP, **protein** conjugates 123018-18-8DP, **protein** conjugates
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of)
IT 123018-16-6DP, conjugates with antimelanoma monoclonal **antibody** **Fab** fragment 123018-18-8DP, conjugates with antimelanoma monoclonal **antibody** **Fab** fragment
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, for biodistribution studies)
IT 123018-11-1P 123018-12-2P 123018-13-3P 123018-14-4P 123018-15-5P 123018-16-6P 123018-17-7P 123018-18-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, in **protein** **radioiodination**)
IT 74-85-1D, Ethene, **radiohalogenated** derivs.
RL: ANST (Analytical study)
(**protein** labeling with, biol. activity in relation to)
IT 128-09-6, N-Chlorosuccinimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butylstannylbenzoate deriv.)
IT 6066-82-6, N-Hydroxysuccinimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butylstannylbenzoate deriv. and dicyclohexylcarbodiimide)
IT 769-39-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butylstannylpentenoate deriv. and dicyclohexylcarbodiimide)
IT 538-75-0, Dicyclohexylcarbodiimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butylstannylpentenoate deriv. and tetrafluorophenyl)
IT 1075-49-6, 4-Ethenylbenzoic acid 6089-09-4, 4-Pentynoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butyltinhydride)
IT 97-94-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butyltinhydride and pentynoic acid)
IT 67099-40-5, 3,3-Dimethyl-4-pentynoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butyltinhydride and tri-Et boride)
IT 688-73-3, Tri-n-butyltinhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pentynoic acid)
IT **13981-56-1**, Fluorine-18, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(monoclonal **antibody** and other **protein** labeling with, ethylene derivs. in, biol. activity in relation to)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1989:420216** HCAPLUS
DN **111:20216**
TI Affinity enhancement immunological reagents for detection and killing of specific target cells
IN Barbet, Jacques; Delaage, Michel; Le Doussal, Jean Marc
PA Immunotech S. A., Fr.

SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM A61K049-00
ICS A61K043-00; A61K047-00
CC 8-9 (**Radiation** Biochemistry)
Section cross-reference(s): **34**
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 263046	A1	19880406	EP 1987-430031	19870916	<--
	EP 263046	B1	19920415			
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE					
	FR 2604092	A1	19880325	FR 1986-13146	19860919	<--
	FR 2604092	B1	19900413			
	US 5256395	A	19931026	US 1987-96829	19870910	<--
	AT 74769	E	19920515	AT 1987-430031	19870916	<--
	ES 2032468	T3	19930216	ES 1987-430031	19870916	<--
	CA 1306414	A1	19920818	CA 1987-547184	19870917	<--
	AU 8778656	A1	19880421	AU 1987-78656	19870918	<--
	AU 613318	B2	19910801			
	JP 63159327	A2	19880702	JP 1987-234680	19870918	<--
	JP 2612454	B2	19970521			
PRAI	FR 1986-13146		19860919	<--		
	EP 1987-430031		19870916	<--		

AB Immunol. reagents comprise (a) a monoclonal **antibody** or fragment, with binding affinity for a desired antigen (e.g. cell-, tumor-, or tissue-assocd.), conjugated to a monoclonal **antibody** or fragment with binding affinity for a desired **hapten**; and (b) a synthetic mol. comprising .gtoreq.2 **haptens** (which bind the conjugate), .gtoreq.1 site suitable for **radiolabeling**, labeling with a stable paramagnetic metal, or coupling to a drug or toxin, and a chem. structure to link these functions. These reagents can bind to target cells in a specific way; the **hapten** localizes preferentially on the antigen-bearing cells even in the presence of excess **antibody** conjugates (affinity enhancement). The reagents are used in vitro or in vivo to detect tumors, metastases, or other tissue injuries when the synthetic mol. carries **radioactive** or paramagnetic compds., and to kill target cells when carrying **radioactive** compds., drugs, or toxins. The **F(ab')**2 fragment of anti-Lyb8.2 **antibody** (clone CY34) was treated with succinimidyl 4-(N-maleimidomethyl)cyclohexane-1-carboxylate and conjugated to the **Fab'** fragment of anti-2,4-DNP **antibody**. BALB/c mouse spleen cells (107 cells/mL), contg. Lyb8.2 antigens, were incubated with the conjugate (3.10 .times. 10-9M) for 2 h at 37.degree. before binding 111In-labeled bis[N.epsilon.-(2,4-dinitrophenyl)-L-lysyl]diethylenetriaminepentaacetic acid (I) or [N.epsilon.-(2,4-dinitrophenyl)-L-lysyl]diethylenetriaminepentaacetic acid (II) (both **prepd**. from 2,4-dinitrophenyllysine and DTPA cyclic anhydride). Under these conditions, 26% (bound/free) of labeled I became bound to the cells (of which .apprx.70% are Lyb8.2 pos.), as opposed to only 6% (bound/free) of the monomeric tracer II. In the absence of conjugate, the nonspecific binding of labeled tracers was .apprx.0.2%.

ST monoclonal **antibody** specificity **hapten** cell antigen; immunoreagent diagnosis neoplasm inhibition

IT Pokeweed
(antiviral **proteins** of, **hapten** conjugates, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Antigens
RL: BIOL (Biological study)
(cell- and tissue-assocd., dual-specificity monoclonal **antibodies** to **hapten** and, for detecting and killing

target cells)
IT Pharmaceuticals
Toxins
RL: BIOL (Biological study)
(conjugates with **hapten**, target cell killing with dual-specificity monoclonal **antibodies** and)
IT Imaging
(dual-specificity monoclonal **antibodies** and **hapten**-metal conjugates for)
IT Cytotoxic agents
Neoplasm inhibitors
(dual-specificity monoclonal **antibodies** and **hapten**-toxin conjugates as)
IT Antigens
Fibrins
Myosins
RL: BIOL (Biological study)
(dual-specificity monoclonal **antibodies** to **hapten** and, for detecting and killing target cells)
IT **Radioelements**, biological studies
RL: BIOL (Biological study)
(**haptens** labeled with, target cell killing with dual-specificity monoclonal **antibodies** and)
IT Chelating agents
Phenols, uses and miscellaneous
RL: USES (Uses)
(in immunochem. reagent for detecting and killing target cells)
IT Halogenation
(of phenolic **haptens**, target cell killing with dual-specificity monoclonal **antibodies** in relation to)
IT **Haptens**
RL: BIOL (Biological study)
(**radioisotope** or toxin conjugates, monoclonal **antibodies** to cell antigens and, for detecting and killing target cells)
IT Spleen
(targeting of cell antigens of, with dual-specificity monoclonal **antibodies** and **hapten-radioisotope** conjugates)
IT Lung, neoplasm
Lymphoma
Melanoma
(targeting of, by dual-specificity monoclonal **antibodies** and **hapten-radioisotope** or -toxin conjugates)
IT Plant
(toxins of, **hapten** conjugates, target cell killing with dual-specificity monoclonal **antibodies** and)
IT Antigens
RL: BIOL (Biological study)
(CD5, dual-specificity monoclonal **antibodies** to DNP and, cell targeting by)
IT Animal cell line
(HPB-ALL, targeting of antigens of, with dual-specificity monoclonal **antibodies** and **hapten-radioisotope** conjugates)
IT Antigens
RL: BIOL (Biological study)
(Lyb-8.2, dual-specificity monoclonal **antibodies** to DNP and, cell targeting by)
IT **Tomography**
(NMR, dual-specificity monoclonal **antibodies** and **hapten**-metal conjugates for)
IT Animal cell line

(Namalwa, targeting of antigens of, with dual-specificity monoclonal **antibodies** and **hapten-radioisotope** conjugates)

IT **Proteins**, specific or class
RL: BIOL (Biological study)
(conjugates, antiviral, of pokeweed, with **haptens**, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Alkaloids, compounds
RL: BIOL (Biological study)
(conjugates, of Vinca, with **haptens**, target cell killing with dual-specificity monoclonal **antibodies** and)

IT **Peptides**, compounds
RL: BIOL (Biological study)
(conjugates, with **haptens** and metals or toxins, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Abrins
Anthracyclines
Ricins
RL: BIOL (Biological study)
(conjugates, with **haptens**, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Toxins
RL: BIOL (Biological study)
(diphtheria, conjugates with **hapten**, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Intestine, neoplasm
(large, targeting of, by dual-specificity monoclonal **antibodies** and **hapten-radioisotope** or -toxin conjugates)

IT **Antibodies**
RL: BIOL (Biological study)
(monoclonal, dual-specificity, to **hapten** and to cell antigen, for detecting and killing target cells)

IT Mammary gland
(neoplasm, targeting of, by dual-specificity monoclonal **antibodies** and **hapten-radioisotope** or -toxin conjugates)

IT Magnetic substances
(para-, conjugates with **hapten**, target cell killing with dual-specificity monoclonal **antibodies** and)

IT Antigens
RL: BIOL (Biological study)
(tumor-assocd., dual-specificity monoclonal **antibodies** to **hapten** and, for detecting and killing target cells)

IT **Proteins**, specific or class
RL: BIOL (Biological study)
(villins, dual-specificity monoclonal **antibodies** to **hapten** and, for detecting and killing target cells)

IT 82707-54-8
RL: BIOL (Biological study)
(dual-specificity monoclonal **antibodies** to DNP and, cell targeting by)

IT 14133-76-7, biological studies 14885-78-0, biological studies
RL: BIOL (Biological study)
(**hapten** labeled with metastable, target cell detection and killing with dual-specificity monoclonal **antibodies** and)

IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-54-2**, Gadolinium, biological studies 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 13981-50-5, Cobalt-57, biological studies **13981-56-1**, Fluorine-18, biological studies 14119-09-6, Gallium-67, biological studies 14158-31-7, Iodine-125, biological studies 14687-25-3, Lead-203, biological studies 14913-49-6, Bismuth-212, biological studies 15715-08-9, Iodine-123, biological

studies 15750-15-9, Indium-111, biological studies 15755-39-2, Astatine-211, biological studies 15757-14-9, Gallium-68, biological studies 15757-86-5, Copper-67, biological studies 15758-35-7, Ruthenium-97, biological studies 15765-38-5, Bromine-76, biological studies 15765-39-6, Bromine-77, biological studies
RL: BIOL (Biological study)
(**hapten** labeled with, target cell detection and killing with dual-specificity monoclonal **antibodies** and)

IT 10466-72-5
RL: BIOL (Biological study)
(hydroxysuccinimidation of)

IT 51-28-5D, 2,4-Dinitrophenol, derivs., **radioisotope**-labeled or toxin conjugates 121198-92-3D, **radioisotope**-labeled or toxin conjugates 121198-93-4D, **radioisotope**-labeled or toxin conjugates
RL: BIOL (Biological study)
(monoclonal **antibodies** to cell antigens and, for detecting and killing target cells)

IT 121198-95-6P 121198-96-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and iodination of)

IT 82321-04-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and reaction with tyrosyllysine)

IT 121198-94-5DP, indium-111 complexes 121198-97-8P 121213-41-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of and cell targeting with dual-specificity monoclonal **antibodies** and)

IT 673-08-5, L-Tyrosyl-glycine 54925-88-1, L-Tyrosyl-L-lysine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with DNP deriv.)

IT 1094-76-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with DTPA cyclic anhydride)

IT 23911-26-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dinitrophenyllysine)

IT 59-05-2D, Methotrexate, **hapten** conjugates 7440-06-4D, Platinum, complexes, **hapten** conjugates
RL: BIOL (Biological study)
(target cell detection and killing with dual-specificity monoclonal **antibodies** and)

IT 75037-46-6D, Gelonin, **hapten** conjugates
RL: BIOL (Biological study)
(target cell killing with dual-specificity monoclonal **antibodies** and)

IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-54-2**, Gadolinium, biological studies **13981-56-1**, Fluorine-18, biological studies
RL: BIOL (Biological study)
(**hapten** labeled with, target cell detection and killing with dual-specificity monoclonal **antibodies** and)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-54-2 HCAPLUS
CN Gadolinium (8CI, 9CI) (CA INDEX NAME)

Gd

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1989:169833** HCAPLUS
DN **110:169833**
TI **Preparation** of 18F-methylbenzoyl derivatives for use in positron emission **tomography**
IN Jacobson, K. A.; Kirk, K. L.; Furlano, D. C.
PA United States Dept. of Health and Human Services, USA
SO U. S. Pat. Appl., 32 pp. Avail. NTIS Order No. PAT-APPL-7-168 494.
CODEN: XAXXAV
DT Patent
LA English
CC 9-14 (Biochemical Methods)
Section cross-reference(s): **8**, 25
FAN.CNT 4

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 168494	A0	19880715		US 1988-168494	19880315	<--
	US 5098996	A	19920324				
	US 664953	A0	19850510		US 1984-664953	19841026	<--
	US 4612315	A	19860916				
	US 717624	A0	19850927		US 1985-717624	19850329	<--
PRAI	US 1984-664953		19841026	<--			
	US 1985-717624		19850329	<--			
	US 1986-833035		19860226	<--			
	US 1986-874143		19860613	<--			

OS MARPAT 110:169833
AB Methods for introducing **radioisotopic** F into biol. active mols. for use in diagnostic nuclear medicine are described. A p-bromomethylbenzoyl group is coupled to an amino group via its N-hydroxysuccinimide ester, giving compds. BrCH2BzNR1R2 (I; R1, R2 undefined). Br is then displaced by F to produce the p-fluoromethylbenzoyl group, giving compds. FCH2BzNR1R2 (II; R1, R2 undefined). Alternatively, a functionalized bromomethylbenzoyl group is initially fluorinated, and then coupled to a functionalized drug, biopolymer, or any other compd. The latter may optionally be carried out by the use of prosthetic groups ZCH2BzXY [X = NH(CH2)n, NH(CH2)mN(Boc)(CH2)n (Boc = tert-butoxycarbonyl), NH(CH2)mO(CH2)n, etc.; Y = CO2H, NH2, Boc-amino, N-hydroxysuccinimide carboxylate, etc.; Z = Br, I, mesylate, tosylate, etc.; m, n = 0-6]. N-Succinimidyl-p-(bromomethyl)benzoate was combined with 2-phenylethylamine in DMF for 1 h, extd. with EtOAc, washed with acid/base, and recrystd. to give I [R1 = (CH2)2; R2 = Ph], which was dissolved in MeCN, treated with 2 equiv of Bu4NF, dried, and heated at 50.degree. to yield II [R1 = (CH2)2; R2 = Ph].

ST fluoromethylbenzoyl **radioisotope** deriv; **tomog**
fluoromethylbenzoyl **radioisotope** deriv

IT Adrenergic antagonists
(fluoromethylbenzoyl indole derivs. as, receptor affinity of)

IT Amines, compounds
RL: ANST (Analytical study)
(conjugates, with fluoromethylbenzoyl derivs., for brain metab. study)

IT **Peptides**, biological studies
RL: PRP (Properties)
(fluoromethylbenzoyl, receptor affinity of)

IT Receptors
RL: ANST (Analytical study)
(purinergic, antagonists, fluoromethylbenzoyl dialkylxanthine derivs. as, receptor affinity of)

IT Receptors
RL: ANST (Analytical study)
(purinergic A1, agonists and antagonists, fluoromethylbenzoyl purine derivs. as, receptor affinity of)

IT Receptors
RL: ANST (Analytical study)
(purinergic A2, antagonists, fluoromethylbenzoyl purine derivs. as, receptor affinity of)

IT 120-73-0D, Purine, fluoromethylbenzoyl derivs.
RL: ANST (Analytical study)
(adenosine receptor agonists and antagonists)

IT 120131-78-4
RL: ANST (Analytical study)
(adrenergic antagonist)

IT 120147-91-3
RL: ANST (Analytical study)
(brain adenosine receptor agonist)

IT 104344-41-4 117723-92-9 120131-77-3 120147-92-4
RL: ANST (Analytical study)
(brain adenosine receptor antagonist)

IT 429-41-4, Tetrabutylammonium fluoride
RL: ANST (Analytical study)
(bromotoluic acid Bu ester fluorination with)

IT 120147-93-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(demethylation of)

IT 108052-76-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of)

IT 108052-76-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of, with tetrabutylammonium fluoride)

IT 65190-50-3P 118507-17-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and amidation of, in fluoromethylbenzoyl derivs. **prepn.**)

IT 120131-79-5P 120131-80-8P 120177-52-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** and binding activity of)

IT 118507-18-9P 118507-19-0P 118507-20-3P 118507-21-4P 118507-22-5P
118507-23-6P 118507-24-7P 118507-25-8P 118507-26-9P 118507-27-0P
118507-28-1P 118507-30-5P 120131-67-1P 120131-68-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and fluorination of, in fluoromethylbenzoyl derivs. **prepn.**)

IT 57260-73-8P 68076-36-8P 120059-15-6P 120059-16-7P 120131-71-7P
120131-72-8P 120131-73-9P 120131-81-9P 120131-82-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and reaction of, in fluoromethylbenzoyl derivs. **prepn.**)

IT 118507-31-6P 118507-32-7P 118507-33-8P 118507-34-9P 118507-35-0P
118507-36-1P 118507-37-2P 118507-38-3P 118507-39-4P 118507-40-7P
118507-41-8P 118507-43-0P 118507-45-2P 120131-69-3P 120131-70-6P
120131-74-0P 120131-83-1P 120131-85-3P 120131-89-7P 120131-90-0P
120131-91-1P 120131-92-2P 120131-93-3P 120131-94-4P, Succinimidyl p-hydroxymethylbenzoate 120177-50-6P 120177-53-9P 120177-54-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of)

IT 120131-75-1P 120131-76-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, as brain adenosine receptor agonist)

IT **13981-56-1DP**, Fluorine-18, methylbenzoyl derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, for use in brain imaging)

IT 15852-63-8P, Ethyl p-hydroxymethylbenzoate 120131-86-4P 120131-87-5P
120131-88-6P 120131-96-6P 120131-97-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, in fluoromethylbenzoyl derivs. **prepn.**)

IT 373-68-2, Tetramethylammonium fluoride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromomethylbenzoylamino)

IT 6066-82-6, N-Hydroxysuccinimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromotoluic acid)

IT 124-63-0, Mesyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with butoxycarbonyl hydroxymethylbenzoylaminoethylamine)

IT 100-74-3, 4-Ethylmorpholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutoxycarbonyl-insulin and disuccinimidylsuberate)

IT 76403-92-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibutoxycarbonyl-insulin and ethylmorpholine)

IT 28920-43-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diethylenetriamine)

IT 120177-51-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with disuccinimidylsuberate and ethylmorpholine)

IT 15852-63-8, Ethyl p-hydroxymethylbenzoate 24424-99-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethylenediamine)

IT 111-40-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with fluorenemethyl chloroformate)

IT 109-02-4, N-Methylmorpholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with fluorenemethyloxycarbonyl-diethylenetriamine and butoxycarbonyldicarbonate)

IT 24424-99-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with fluorenemethyloxycarbonyl-diethylenetriamine and methylmorpholine)

IT 3006-96-0, p-Hydroxymethylbenzoic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrogen chloride gas)

IT 7647-01-0, Hydrogen chloride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxymethylbenzoic acid)

IT 6232-88-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxysuccinimide)
IT 120131-84-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxysuccinimidoylsuberate and ethylmorpholine)
IT 100-74-3, N-Ethylmorpholine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxysuccinimidoylsuberate and fluoromethylbenzoylethylenediamine)
IT 6232-88-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with monobutylethylenediamine)
IT 64-04-0D, 2-Phenylethylamine, insulin reaction products
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with succinimidylbromomethylbenzoate)
IT 51-67-2 61-54-1, 1H-Indole-3-ethanamine 64-04-0, Benzeneethanamine 74-89-5, Methanamine, reactions 106-49-0, reactions 109-73-9, 1-Butanamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with succinimidylbromomethylbenzoate, in fluoromethylbenzoyl derivs. **prepn.**)
IT 598-41-4 687-51-4 687-69-4 2749-11-3 2799-16-8 3886-69-9 51165-05-0 56613-80-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sulfosuccinimidylbromomethylbenzoate, in fluoromethylbenzoyl derivs. **prepn.**)
IT 107-15-3, 1,2-Ethanediamine, reactions 110-60-1, 1,4-Diaminobutane
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tert-butoxycarbonyl anhydride)
IT 120-72-9D, Indole, fluoromethylbenzoyl derivs.
RL: ANST (Analytical study)
(.beta.-adrenergic antagonists, receptor affinity of)
IT **13981-56-1DP**, Fluorine-18, methylbenzoyl derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, for use in brain imaging)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1989:110849** HCAPLUS
DN **110:110849**
TI Direct electrophilic **radiofluorination** of phenylalanine, tyrosine and dopa
AU Coenen, H. H.; Franken, K.; Kling, P.; Stoecklin, G.
CS Inst. Chem., Kernforschungsanlage Juelich G.m.b.H., Juelich, D-5170, Fed. Rep. Ger.
SO Applied Radiation and Isotopes (**1988**), 39(12), 1243-50
CODEN: ARISEF; ISSN: 0883-2889
DT Journal
LA English
CC 8-2 (**Radiation** Biochemistry)
Section cross-reference(s): **34**
AB The reactivity and selectivity of 18F2 and AcO18F with arom. **amino acids** in various solvents were compared. An HPLC method based on ion-pair chromatog. was developed allowing the isocratic sepn. of all fluoroisomers of phenylalanine, tyrosine, and dopa with a single column. While AcO18F exhibited a higher regioselectivity and less side product

formation, practical labeling yields were higher with 18F2. In CF3CO2H as solvent, the preferentially formed isomers 2-[18F]fluorophenylalanine, 3-[18F]fluorotyrosine, and 2-[18F]fluorodopa were obtained in good yields of 20, 28, and 7.5%, resp. After O-acetylation of tyrosine, 2-[18F]flurotyrosine was obtained with a **radiochem.** yield of 16% by direct fluorination with [18F]AcOF followed by hydrolysis. In all cases, the pure L-isomer was obtained.

ST electrophile **radiofluorinated** phenylalanine dopa tyrosine

IT Solvent effect
(in electrophilic **radiofluorinaton** of dopa and phenylalanine and tyrosine)

IT **13981-56-1**, Fluorine-18, biological studies
RL: BIOL (Biological study)
(electrophilic fluorination by, of dopa, phenylalanine and tyrosine, positron emission **tomog.** in relation to)

IT 59-92-7, Dopa, biological studies 60-18-4, Tyrosine, biological studies 63-91-2, Phenylalanine, biological studies
RL: RCT (Reactant); RACT (Reactant or reagent)
(electrophilic **radiofluorination** of, positron emission **tomog.** in relation to)

IT 33285-27-7P 33285-28-8P 66414-39-9P 92812-81-2P 92812-82-3P 105801-81-8P 118584-60-4P 119401-75-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of, positron emission **tomog.** in relation to)

IT **13981-56-1**, Fluorine-18, biological studies
RL: BIOL (Biological study)
(electrophilic fluorination by, of dopa, phenylalanine and tyrosine, positron emission **tomog.** in relation to)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1986:560447** HCAPLUS

DN **105:160447**

TI Synthesis and biodistribution of fluorine-18-labeled fluoronitroimidazoles: potential in vivo markers of hypoxic tissue

AU Jerabek, Paul A.; Patrick, Timothy B.; Kilbourn, Michael R.; Dischino, Douglas D.; Welch, Michael J.

CS Sch. Med., Washington Univ., St. Louis, MO, 63110, USA

SO Applied Radiation and Isotopes (**1986**), 37(7), 599-605
CODEN: ARISEF; ISSN: 0883-2889

DT Journal

LA English

CC 71-6 (Nuclear Technology)
Section cross-reference(s): **8**, **34**

OS CASREACT 105:160447

AB Three 18F [**13981-56-1**] labeled fluoronitroimidazoles were **prepd.** as potential in vivo markers of hypoxic cells in tumors and ischemic areas of the heart and brain. 1-(2-Nitroimidazolyl)-3-[18F]fluoro-2-hydroxypropanol [18F]fluoro-normethoxymisonidazole) 4, 1-(2-[18F]fluoroethyl)-2-nitroimidazole 7, and 1-(2-[18F]fluoroethyl)-2-methyl-5-nitroimidazole ([18F]fluoro-norhydroxymetronidazole) 10 were **prepd.** in av. **radiochem.** yields of <1%, 23% and 15-43% (8% at the no-carrier-added level), resp., at end of synthesis. The in vivo biodistribution in rats was detd. for each of the 18F-labeled fluoronitroimidazoles. At 1 and 3 h after administration, the tissue distribution of each of the 18F-labeled nitroimidazoles was quite uniform

and consistent with that of nitroimidazoles previously studied. The need is suggested for a suitable animal model to evaluate their potential as in vivo markers of hypoxic tissue in the brain.

ST fluorine 18 fluoronitroimidazole; heart fluorine 18 fluoronitroimidazole; brain fluorine 18 fluoronitroimidazole

IT Brain, composition
Heart, composition
Neoplasm, composition
Rat
(synthesis and biodistribution of fluorine-18-labeled fluoronitroimidazoles in)

IT **13981-56-1**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeling with, of fluoronitroimidazoles, biodistribution from)

IT 104613-87-8P 104613-88-9P 104613-89-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** and biodistribution of, in heart and brain)

IT **13981-56-1**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(labeling with, of fluoronitroimidazoles, biodistribution from)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1985:12339** HCAPLUS

DN **102:12339**

TI Tumor localization and therapy with labeled **antibodies** specific to intracellular tumor-associated markers

IN Goldenberg, M. David

PA USA

SO U.S., 9 pp. Cont.-in-part of U.S. 4,361,544.
CODEN: USXXAM

DT Patent

LA English

IC A61K043-00; A61K049-00

NCL 424001100

CC 63-3 (Pharmaceuticals)

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4460561	A	19840717	US 1982-415876	19820908 <--
	US 4361544	A	19821130	US 1980-126261	19800303 <--
PRAI	US 1980-126261		19800303 <--		

AB **Radiolabeled antibodies**, specific to intracellular tumor-assocd. markers for detection, localization and therapy of tumors are **prepd.** for injections. Myeloma IgG from MOPC-21 murine myeloma was labeled with Na-99mTcO4 using SnCl2 in 0.050 HCl soln. or with 111InCl3 after reaction with DTPA carboxycarbonic anhydride. Injections were **prepd.** contg. human serum albumin, phosphate buffer, 0.9% NaCl and labeled antibiotics. Example of tumor localization and tumor therapy are given.

ST **antibody radiolabeled** tumor

IT Neoplasm
(localization of, with **radiolabeled antibodies**)

IT Neoplasm inhibitors
(**radiolabeled antibodies**)

IT **Antibodies**
RL: BIOL (Biological study)

(**radiolabeled**, for tumor localization and therapy)
IT Antigens
RL: BIOL (Biological study)
(CSAp, **antibodies** to, **radiolabeled**, for tumor localization and therapy)
IT Immunoglobulins
RL: BIOL (Biological study)
(G, **radiolabeled**, for tumor localization and therapy)
IT Fetoproteins
RL: BIOL (Biological study)
(.alpha.-, **antibodies** to, **radiolabeled**, for tumor localization and therapy)
IT 14133-76-7, biological studies 14304-79-1, biological studies
14390-71-7, biological studies 14390-73-9, biological studies
14885-78-0, biological studies
RL: BIOL (Biological study)
(**antibodies** labeled with metastable, for tumor localization and therapy)
IT 10043-66-0, biological studies 13968-53-1, biological studies
13981-51-6, biological studies **13981-56-1**, biological studies
13982-78-0, biological studies 14041-48-6, biological studies
14119-09-6, biological studies 14158-32-8, biological studies
14331-95-4, biological studies 14391-22-1, biological studies
14391-96-9, biological studies 14798-12-0, biological studies
14834-67-4, biological studies 14900-13-1, biological studies
15715-08-9, biological studies 15750-15-9, biological studies
15756-62-4, biological studies 15757-14-9, biological studies
15758-35-7, biological studies 15765-39-6, biological studies
RL: BIOL (Biological study)
(**antibodies** labeled with, for tumor localization and therapy)
IT 9002-61-3
RL: BIOL (Biological study)
(**antibodies** to, **radiolabeled**, for tumor localization and therapy)
IT **13981-56-1**, biological studies
RL: BIOL (Biological study)
(**antibodies** labeled with, for tumor localization and therapy)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1984:592423** HCAPLUS
DN **101:192423**
TI **Radiofluorination** with fluorine-18-labeled acetyl hypofluorite: [18F]L-6-fluorodopa
AU Chirakal, Raman; Firnau, Gunter; Couse, Joel; Garnett, E. S.
CS Health Sci. Cent., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.
SO International Journal of Applied Radiation and Isotopes (**1984**), 35(7), 651-3
CODEN: IJARAY; ISSN: 0020-708X
DT Journal
LA English
CC 34-2 (**Amino Acids, Peptides**, and **Proteins**)
AB AcO18F was produced in glacial AcOH from 18F2 gas dild. with neon and treated with 3-methoxy-4-hydroxy-L-phenylalanine Et ester-HCl at room temp. for 20 min either in glacial AcOH or in a mixt. of glacial AcOH and CF3CO2H. After hydrolysis of the reaction products with 48% HBr

L-[18F]6-fluorodopa (4%, EOB, **radiochem.** yield) was isolated by reverse-phase high- pressure liq. chromatog. Despite its low yield, the method may be useful for the prodn. of L-[18F]6-fluorodopa with which the dopamine rich regions of the brain can be demonstrated and with which dopamine metab. can be measured by positron emission **tomog.**

ST fluorine 18 fluorodopa; dopa fluoro fluorine 18; **radiofluorination** methoxyhydroxyphenylalanine acetyl hypofluorite

IT Fluorination
(**radio-**, of methoxyhydroxyphenylalanine Et ester hydrochloride, with fluorine-labeled acetyl hypofluorite)

IT 84243-94-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and fluorination by, of methoxyhydroxyphenylalanine ester)

IT 92812-80-1P 92812-83-4P 92812-84-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**prepn.** and hydrolysis of)

IT 66414-39-9P 92812-81-2P 92812-82-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**prepn.** of)

IT 75290-48-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(**radiofluorination** of, with acetyl hypofluorite)

IT **13981-56-1**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acetic acid)

IT 64-19-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with labeled fluorine)

IT **13981-56-1**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with acetic acid)

RN 13981-56-1 HCAPLUS

CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2003 ACS

AN **1982:588255** HCAPLUS

DN **97:188255**

TI Tumor localization and therapy with labeled anti-CEA **antibody**

IN Goldenberg, Milton D.

PA USA

SO U.S., 10 pp.
CODEN: USXXAM

DT Patent

LA English

IC A61K049-00

NCL 424001000

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): **8**, 9

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4348376	A	19820907	US 1980-126262	19800303 <--
	EP 35265	A2	19810909	EP 1981-101473	19810302 <--
	EP 35265	A3	19820407		
	EP 35265	B1	19860102		

R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
WO 8102522 A1 19810917 WO 1981-US261 19810302 <--
W: AU, BR, DK, FI, HU, JP, KP, MC, MG, MW, NO, RO, SU
RW: CF, CG, CM, GA, SN, TD, TG
AU 8170341 A1 19810923 AU 1981-70341 19810302 <--
AU 556548 B2 19861106
JP 57500195 T2 19820204 JP 1981-501163 19810302 <--
JP 03006125 B4 19910129
AT 17190 E 19860115 AT 1981-101473 19810302 <--
ZA 8101384 A 19821124 ZA 1981-1384 19810303 <--
IL 62267 A1 19850531 IL 1981-62267 19810303 <--
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DK 8104821 A 19811102 DK 1981-4821 19811102 <--
US 4444744 A 19840424 US 1982-414729 19820903 <--
AU 8767868 A1 19870430 AU 1987-67868 19870121 <--
AU 581555 B2 19890223
JP 03141230 A2 19910617 JP 1989-135703 19890529 <--
JP 07020887 B4 19950308
JP 03141231 A2 19910617 JP 1989-135704 19890529 <--
JP 03157337 A2 19910705 JP 1989-135701 19890529 <--
JP 03157338 A2 19910705 JP 1989-135702 19890529 <--
PRAI US 1980-126261 19800303 <--
US 1980-126262 19800303 <--
US 1980-126263 19800303 <--
EP 1981-101473 19810302 <--
WO 1981-US261 19810302 <--

AB **Radiolabeled antibodies** to carcinoembryonic antigen (CEA) are **prepd.** and used to locate, diagnose and stage CEA-contg. tumors by external photoscanning while achieving increased resoln., convenience and efficiency of operation. Injectable compns. contg. these **antibodies** can be used in tumor therapy. Normal goat IgG was purified by affinity chromatog. on CNBr-linked CEA and labeled with 131I (20 .mu.g IgG/mCi 131I) in the presence of chloramine T and NaHSO3. Sterile, pyrogen-free injections were **prepd.** contg. 131I-anti-CEA-IgG (specific activity of 40 .mu.Ci/.mu.g). The localization of tumors by using anti-CEA IgG was demonstrated in humans.

ST antigen carcinoembryonic **radiolabeled antibody** tumor; tumor localization antigen carcinoembryonic **antibody**

IT Neoplasm
(localization of, **radiolabeled antibodies** to carcinoembryonic antigens for)

IT Neoplasm inhibitors
(**radiolabeled antibodies** to carcinoembryonic antigens)

IT Immunoglobulins
RL: BIOL (Biological study)
(G, reaction products with **radioisotopes**, as **antibodies** to carcinoembryonic antigens, for tumor localization)

IT Immunoglobulins
RL: BIOL (Biological study)
(G, monoclonal, reaction products with **radioisotopes**, as **antibodies** to carcinoembryonic antigens, for tumor localization)

IT Antigens
RL: BIOL (Biological study)
(carcinoembryonic, **radiolabeled** immunoglobulin **antibodies** to, for tumor localization)

IT 13968-53-1D, reaction products with Igs 13981-51-6D, reaction products with Igs **13981-56-1D**, reaction products with Igs 13982-78-0D, reaction products with Igs 14041-48-6D, reaction products with Igs 14119-09-6D, reaction products with Igs 14158-32-8D, reaction products with Igs 14331-95-4D, reaction products with Igs 14378-53-1D, reaction

products with Igs 14391-22-1D, reaction products with Igs 14834-67-4D, reaction products with Igs 14900-13-1D, reaction products with Igs 14913-89-4D, reaction products with Igs 15750-15-9D, reaction products with Igs 15756-62-4D, reaction products with Igs 15757-14-9D, reaction products with Igs 15758-35-7D, reaction products with Igs 15765-39-6D, reaction products with Igs
RL: BIOL (Biological study)
(**antibodies** to carcinoembryonic antigens, for tumor localization)

IT 14885-78-0D, reaction products with Igs
RL: BIOL (Biological study)
(metastable, as **antibodies** to carcinoembryonic antigens, for tumor detection)

IT 14133-76-7D, reaction products with Igs 14304-79-1D, reaction products with Igs 14390-71-7D, reaction products with Igs 14390-73-9D, reaction products with Igs 15765-79-4D, reaction products with Igs
RL: BIOL (Biological study)
(metastable, as **antibodies** to carcinoembryonic antigens, for tumor localization)

IT 10043-66-0DP, reaction products with Igs 15715-08-9DP, reaction products with Igs
RL: PREP (Preparation)
(**prepn.** of, as **antibodies** to carcinoembryonic antigens, for tumor localization)

IT **13981-56-1D**, reaction products with Igs
RL: BIOL (Biological study)
(**antibodies** to carcinoembryonic antigens, for tumor localization)

RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

L159 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2003 ACS
AN **1982:552196** HCAPLUS
DN **97:152196**
TI Production of cyclotron **radioisotopes** and **radiopharmaceuticals** for medical use
AU Comar, D.
CS Dep. Biol., Serv. Hosp. F. Joliot, Orsay, 91406, Fr.
SO Int. Conf. Cyclotrons Their Appl., [Proc.], 9th (**1982**), Meeting Date 1981, 645-52. Editor(s): Gendreau, G. Publisher: Ed. Phys., Les Ulis, Fr.
CODEN: 48NOAD
DT Conference; General Review
LA English
CC 71-0 (Nuclear Technology)
Section cross-reference(s): **8**, 63, **74**
AB A review with 42 refs. Positron emission **tomog.** in conjunction with **radiopharmaceuticals** labeled with e+ emitting **radionuclides** opens the possibility of visualizing in vivo in an atraumatic way fundamental parameters of metab. in man. The main e+ emitting **radioisotopes** 11C, 15O, 13N, and 18F used for labeling **radiopharmaceuticals** (sugars, **amino acids**, fatty acids and drugs) are produced by nuclear reaction involving charged particles accelerated with cyclotrons. Small cyclotrons producing 8 MeV d and 15 MeV p seem optimal for the routine prodn. of these **radionuclides**. Some sp. medical examples are given illustrating the potency of this new tool.
ST positron **tomog radioelement** cyclotron review;

pharmaceutical **radioelement** prodn cyclotron review
IT **Radioelements, preparation**
RL: PREP (Preparation)
(prodn. of, cyclotron for positron emission **tomog.** and **radiopharmaceuticals**)
IT **Radiography**
(**laminog., positron emission tomog.**, cyclotron **radioisotope** prodn. for)
IT Medicine
(nuclear, cyclotron prodn. of **radioisotopes** for)
IT Pharmaceuticals
(**radio-**, cyclotron prodn. of **radioisotopes** for)
IT 12585-85-2P
RL: PREP (Preparation)
(-emitters, prodn. of, by cyclotron for medical applications)
IT 13981-22-1P, **preparation 13981-56-1P, preparation** 13982-43-9P, **preparation** 14333-33-6P, **preparation**
RL: PREP (Preparation)
(**prepn.** of, by cyclotron for medical applications)
IT **13981-56-1P, preparation**
RL: PREP (Preparation)
(**prepn.** of, by cyclotron for medical applications)
RN 13981-56-1 HCAPLUS
CN Fluorine, isotope of mass 18, at. (8CI, 9CI) (CA INDEX NAME)

^{18}F

=> d his

(FILE 'HOME' ENTERED AT 11:22:37 ON 08 MAR 2003)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 11:22:57 ON 08 MAR 2003
E GRIFFITHS G/AU
L1 126 S E3,E12,E31,E32
L2 1 S L1 AND 18F?
E IMMUNOMEDIC/PA,CS
L3 126 S E6-E21
E IMMUNOMED/PA,CS
L4 7 S E4-E7
L5 1 S L3,L4 AND 18F?
L6 1 S L2,L5
L7 1 S L1 AND 18(A)F
L8 1 S L3,L4 AND 18(A)F
L9 1 S L6-L8
L10 197 S L1,L3,L4 NOT L9
SEL RN L9

FILE 'REGISTRY' ENTERED AT 11:38:30 ON 08 MAR 2003
L11 37 S E1-E37
L12 28 S L11 AND F/ELS
L13 9 S L11 NOT L12
L14 2 S L13 AND SQL/FA
L15 1 S L12 AND SQL/FA
L16 3 S L14,L15
L17 7 S L13 NOT L16
L18 3 S L17 AND (GD OR FE OR MN)/ELS
L19 4 S L17 NOT L18

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L20           3 S L19 NOT UNSPECIFIED
L21          27 S L12 NOT L13-L20
L22          26 S L21 AND 18F
L23           1 S L21 NOT L22
                E 18F
L24        1671 S E3
L25        1980 S 18F?
L26         309 S L25 NOT L24
L27         147 S L26 NOT (TIS OR AYS)/CI
L28          22 S L27 NOT NUCLEIC?/FS
L29          16 S L28 NOT CCS/CI
L30           2 S L29 AND F/MF
L31        1645 S L24 NOT L22
L32           1 S L31 AND F/MF
L33        1632 S L31 NOT (TIS OR AYS OR CCS)/CI
L34          24 S L33 AND (PMS/CI OR NUCLEIC/FS)
L35        1608 S L33 NOT L34
L36          29 S L35 AND PROTEIN/FS
L37           7 S L36 AND UNSPECIFIED
L38        1579 S L35 NOT L36-L37
L39             STR
L40             STR L39
L41           7 S L40 SAM SUB=L38
L42          22 S 18(A)F
L43           3 S L42 AND 18F
L44          29 S L22,L30,L32
L45          29 S L36,L37
L46        1615 S L24 NOT L44,L45
L47        1578 S L46 NOT ((TIS OR AYS OR CCS OR PMS)/CI OR NUCLEIC/FS)
L48           8 S L39 SAM SUB=L47

     FILE 'HCAPLUS' ENTERED AT 12:23:44 ON 08 MAR 2003
L49          22 S L45
L50        1749 S L44
L51        2087 S L47
L52           3 S L1,L3,L4 AND L49-L51
                E POSITRON/CT
                E E18+ALL
L53        4009 S E5,E6,E4+NT
                E E3+ALL
L54       10500 S E4,E5,E3+NT
                E E2+ALL
L55        1182 S L49-L52 AND L53,L54
L56          52 S L49-L52 AND ANTIBOD?/CW
L57           5 S L49-L52 AND HAPTEN?
L58           2 S L49-L52 AND (MAB OR BSMAB)
L59          66 S L49-L52 AND ANTIBOD?
L60          66 S L56-L59
                E HAPTEN/CT
                E E7+ALL
L61        4088 S E3
L62         437 S E7
L63           5 S L49-L51 AND L61,L62
L64          66 S L60,L63
L65         233 S L49-L51 AND (PROTEIN OR ?PEPTIDE?)
L66         370 S L49-L51 AND (PROTEIN? OR PEPTIDE? OR AMINOACID? OR AMINO ACID
L67          50 S L66 AND L60
L68          32 S L60,L67 AND L53-L55
L69           0 S L60,L67 AND RADIO?/SC,SX
L70          57 S L60,L67 AND RADIA?/SC,SX
L71          24 S L49-L52 AND IMMUN?/SC,SX
L72          71 S L60,L71
L73          54 S L72 AND L65,L66
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L74          26 S L73 AND L53-L55
L75          45 S L73 AND RADI?/SC,SX
L76          50 S L65,L66 AND L60
L77          21 S L76 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
L78          23 S L52,L77
L79          48 S L60,L67-L76 NOT L78
L80          15 S L79 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
L81          38 S L78,L80
L82          32 S L81 AND (F18 OR 18F OR 18(A)(F OR FLUORIN?))
L83           6 S L81 NOT L82
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 12:38:27 ON 08 MAR 2003
L84           4 S E1-E4
L85           1 S L84 AND F/MF

     FILE 'HCAPLUS' ENTERED AT 12:39:00 ON 08 MAR 2003
                SEL HIT RN L82

     FILE 'REGISTRY' ENTERED AT 12:39:04 ON 08 MAR 2003
L86          48 S E5-E52
L87          21 S L86 NOT L22,L85
L88           1 S L87 AND C8H6FN3O
L89          27 S L86 NOT L87

     FILE 'HCAPLUS' ENTERED AT 12:43:08 ON 08 MAR 2003
L90           2 S L88

     FILE 'REGISTRY' ENTERED AT 12:45:46 ON 08 MAR 2003

     FILE 'HCAPLUS' ENTERED AT 12:47:47 ON 08 MAR 2003
L91        1747 S L89
L92        1438 S L91 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
L93           3 S L91 AND L1-L10
L94          22 S L92 AND (HAPTEN? OR ANTIBOD? OR MAB OR BSMAB OR FAB OR F AB)
L95          29 S L92 AND (PROTEIN OR ?PEPTIDE?)
L96          49 S L92 AND (PROTEIN? OR PEPTIDE? OR AMINO ACID? OR AMINOACID?)/S
L97          28 S L92 AND (PROTEIN? OR PEPTIDE? OR AMINO(L)ACID#)/CW
L98          59 S L94-L97
L99           4 S L18 AND L98
L100         10 S (?THIO? OR ?SULF? OR ?SULPH?) AND L98
L101         15 S L98 AND L53-L55
L102         51 S L98 AND RADI?/SC,SX,CW,BI
L103         14 S L98 AND DIAGN?
L104         54 S L93,L99-L103
L105          7 S L98 NOT L104
L106         61 S L104,L105
L107         61 S L93-L106
L108         40 S L107 AND PREP?
L109         57 S L107 AND (18F OR F18 OR 18(A)(F OR FLUORIN?))
L110         61 S L107-L109

     FILE 'REGISTRY' ENTERED AT 12:55:57 ON 08 MAR 2003
L111         25 S L22 NOT F/MF

     FILE 'HCAPLUS' ENTERED AT 12:56:22 ON 08 MAR 2003
L112          1 S L111
L113         60 S L110 NOT L112
L114          3 S L93,L112 AND L94-L110,L112,L113
L115         58 S L113 NOT L114

     FILE 'HCAPLUS' ENTERED AT 12:57:38 ON 08 MAR 2003
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     FILE 'REGISTRY' ENTERED AT 12:59:24 ON 08 MAR 2003
L116          1 S L22 NOT L111
L117          4 S F/MF AND (18F OR F18 OR 18)
L118          4 S L116,L117

     FILE 'HCAPLUS' ENTERED AT 13:00:18 ON 08 MAR 2003
L119       1749 S L118
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 13:02:59 ON 08 MAR 2003

     FILE 'HCAPLUS' ENTERED AT 13:03:38 ON 08 MAR 2003
L120         93 S L119 AND (HAPTEN? OR PROTEIN OR ?PEPTIDE? OR AMINOACID OR AMI
L121         25 S L119 AND (PROTEIN? OR PEPTIDE? OR AMINO ACID?)/SC,SX
L122         43 S L119 AND (ANTIBOD? OR MAB OR BSMAB OR FAB OR F AB)
L123         46 S L119 AND L18
L124        210 S L119 AND L53,L54
L125        269 S L119 AND (?TOMOGRAPH? OR PET)
L126        964 S L119 AND RADI?/SC,SX,CW,BI
L127        120 S L124-L126 AND L120-L123
L128         64 S L127 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
L129         63 S L128 NOT L114
L130         40 S L129 AND PREP?
L131         23 S L129 NOT L130
                SEL DN AN 1 2 5 6 10 12 14 15 16
L132          9 S L131 AND E103-E129
                SEL DN AN L130 5-7 11 16-21 23 24 27 30 31 34 35
L133         17 S L130 AND E130-E180
L134         29 S L114,L132,L133

     FILE 'REGISTRY' ENTERED AT 13:20:45 ON 08 MAR 2003
L135          1 S L24 AND C2HFI2
L136          1 S L24 AND C2H2FI
L137          1 S L24 AND C2FI3
L138          3 S L24 AND C3H3FI2O2
L139          1 S L138 AND ESTER
L140          1 S L24 AND C3H4FIO2
L141          1 S L24 AND C2H2FI2NO
L142          1 S L24 AND C8H5BR2FO
L143          6 S L135-L137,L139-L141
L144          0 S L143 NOT L12

     FILE 'HCAPLUS' ENTERED AT 13:25:07 ON 08 MAR 2003
L145          1 S L135-L143 AND L1-L10
L146          3 S L145,L114
L147          3 S L146 AND L1-L10,L49-L83,L90-L110,L112-L115,L119-L134,L145,L14

     FILE 'REGISTRY' ENTERED AT 13:27:36 ON 08 MAR 2003

     FILE 'HCAPLUS' ENTERED AT 13:27:53 ON 08 MAR 2003
                SET SMARTSELECT ON
L148         SEL L10 1- RN :     844 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 13:28:01 ON 08 MAR 2003
L149        844 S L148
L150        228 S L149 AND SQL/FA
L151        189 S L150 AND PROTEIN/FS
L152         10 S L151 AND 8/SQL
L153          4 S L152 NOT MULTICHAIN/NTE
L154          6 S L152 NOT L153
                E GYWGKGYW/SQEP
L155          1 S E3
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                E CYWGCGYW/SQEP
                SEL RN
L156          0 S E1/CRN

     FILE 'HCAPLUS' ENTERED AT 13:33:14 ON 08 MAR 2003
L157          1 S L155
L158          1 S L157 AND L1-L10,L49-L83,L90-L110,L112-L115,L119-L134,L145-L14

     FILE 'REGISTRY' ENTERED AT 13:34:13 ON 08 MAR 2003

     FILE 'HCAPLUS' ENTERED AT 13:34:30 ON 08 MAR 2003
L159         26 S L134 NOT L147
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